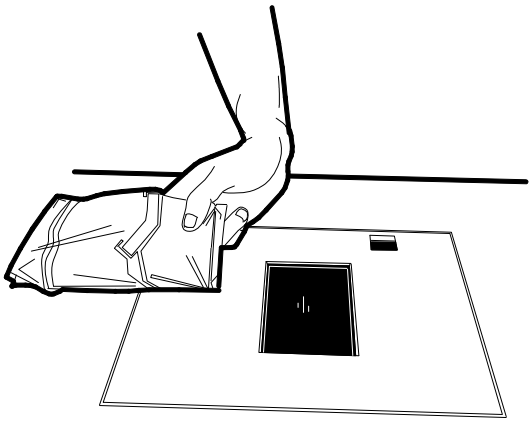
RealScan 7883 Installation and Owner Guide



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August 2007

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RSD-Atlanta

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Revision Record

Date	Pages	Issue	Remarks
02-02	All	A	First printing.
07-02	All	B	Updated to match latest units.
09-02	All	C	Added USB Interface. Updated to match latest units.
10-02	59-72	D	Added Programming Tags.
09-03	All	E	Added 7883-1200 information. Updated to match latest units.
04-04	All	F	Updated Auxiliary Port and USB Programming information
09-04	47, 59	G	Added Scale Parameters worksheet and disable sequence for Mettler Toledo Scale. Added procedure for firmware flashing
02-05	12, 13, 59	H	Updated 7832 Programming and Added 2 8 Wedge Options Worksheet
08-2007	Multiple	I	Updated to include the 1694 and 1695 models

Obtaining Additional Information

Other Information Products	
Order Number	**Title**
B005-0000-1436	NCR RealScan 7883 User Guide
B005-0000-1437	NCR RealScan 7883 Repair Guide
BST0-2121-74	NCR Scanner Programming Tags
BD20-1074-A	NCR Scanner/Scale Interface Programmer's Guide

How To Obtain Information Products

Web Sites

- http://inforetail.AtlantaGA.NCR.COM (NCR only)
- http://www.info.NCR.COM (Anyone)

Online Order

- Connect System (NCR only)

Phone Order

- 800-543-2010 (US area)
- 622-3727 (VOICEplus)
- 44-181-242-5350 (International)

Fax Order

- 937-445-6245 (US area)
- 44 (0) 20 8 242 5355 (International)

E-Mail

- IP136695@exchange.DaytonOH.ncr.COM (US area)
- M0500005@exchange.UnitedKingdom.NCR.COM (International)

Mail Order

- NCR Corporation IPP-Dayton
  1529 Brown St.
  IPP EMD-2
  Dayton, OH 45479
  USA
- NCR Corporation
  915 High Road
  North Finchley
  London N12 0HN United Kingdom

Obtaining Technical Assistance

Technical assistance is available as follows.

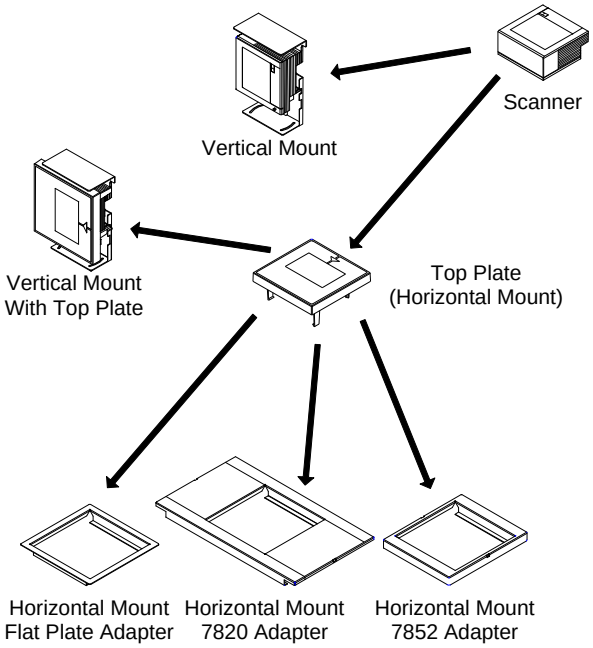
- Technical assistance in the United States: 1-800-262-7782
- Technical assistance in other countries: call your local NCR office
- To order parts: 1-800-438-7830

Note: If you find any defective parts during installation of a new scanner, contact the Customer Satisfaction Hotline at one of the following.

- In the United States, call: 1-800-528-8658 (USA)
- In all other countries call: your local NCR office
- E-mail: CustomerSat.Retail@NCR.com

NCR RealScan 7883 Mountings

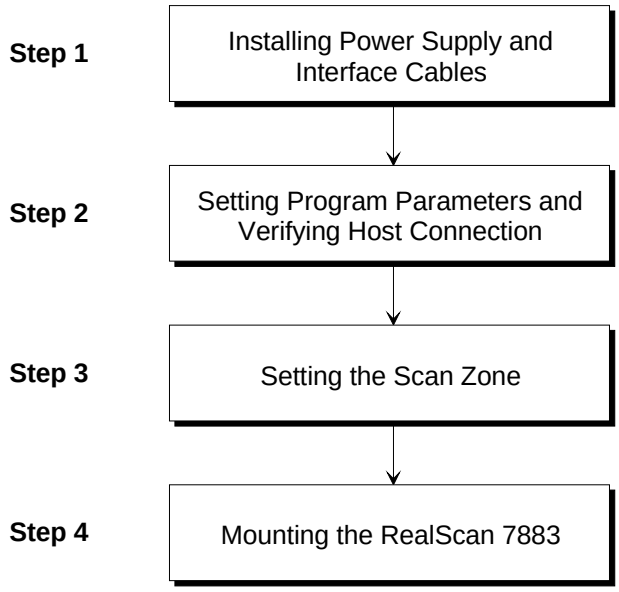
The NCR RealScan 7883 Scanner is a small, compact laser scanner available in two models. The RealScan 7883 has many of the same features found in larger scanners. The RealScan 7883 can be mounted horizontally in a checkstand or vertically above the checkstand. Various mounts are available for the RealScan 7883.



Installation Instructions

When installing a RealScan 7883, it is recommended that you first mount the Power Supply and run all the cables. After connecting the unit to the host terminal, make any necessary programming changes and scan some good tags to verify that the scanner is communicating with the host terminal. After verifying that everything is working correctly, mount the unit in the checkstand. If the RealScan 7883 does not work properly, refer to the problem correcting section in this document: *Correcting Scanner Problems.*

The following flowchart shows the sequence of installation steps. Detailed descriptions of each step follow.



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Step 1 - Installing Power Supply and Interface Cables

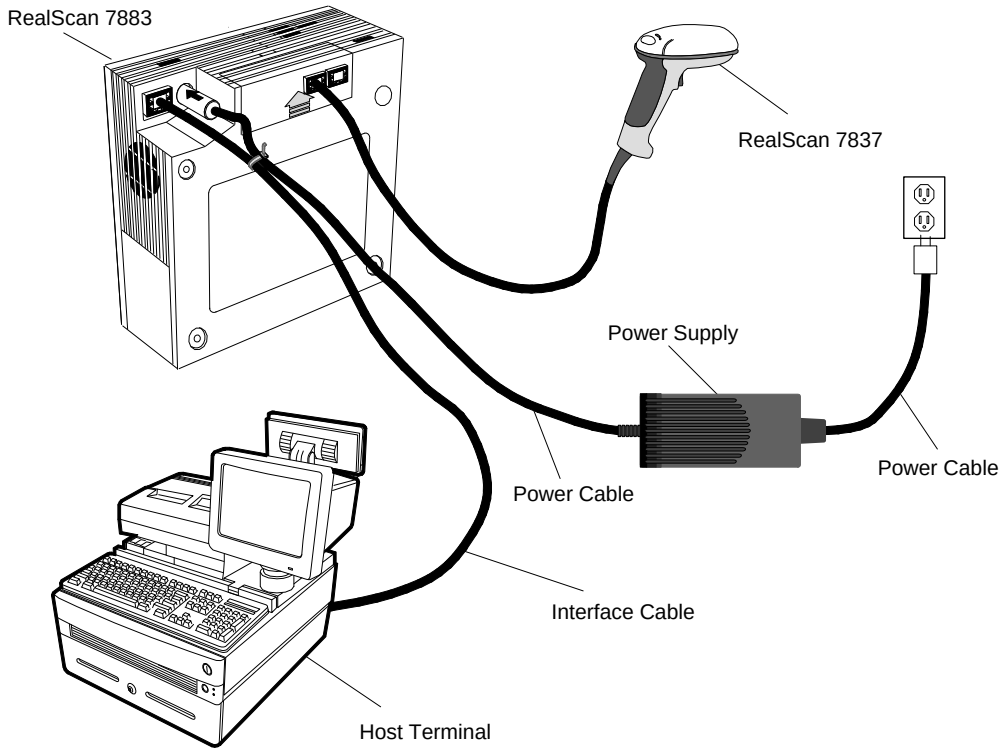
Connecting the Cables to an NCR RealScan 7883

The NCR RealScan 7883 is powered through an external Power Supply. An interface cable connects the RealScan 7883 to the host terminal. Two RS-232 peripheral ports are provided for connecting other devices such as an NCR 7837 Hand-Held Scanner.

Note: If you are using a Keyboard Wedge cable, it must be plugged directly into the PS/2 port on the PC.

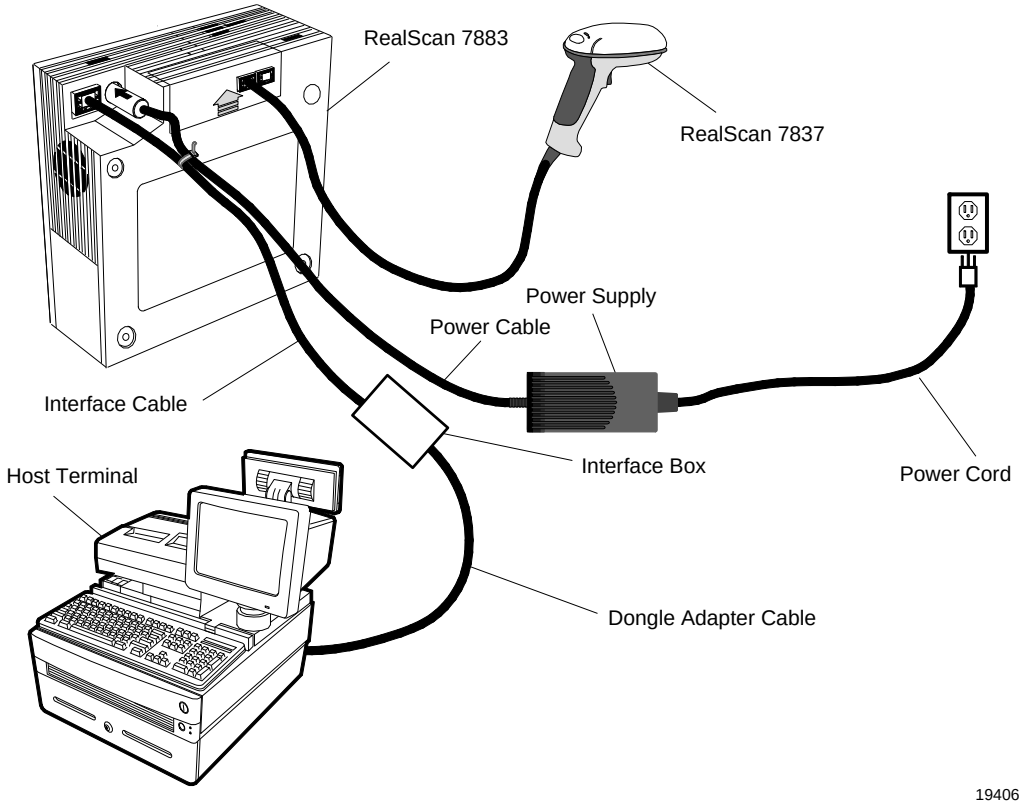
Standard Interface Connection

1. Install the Interface Cable between the RealScan 7883 and the host terminal.
2. Install the Power Supply. Locate it in the checkstand at least 10 inches (25.4 cm) from the RealScan 7883 installed position. Be sure to locate the Power Supply where spilled liquids cannot fall onto it.
3. Fasten a Tie-Wrap around the Power Cable and the Interface Cable to help secure the Power Cable.



7883-1000 USB Interface Connection

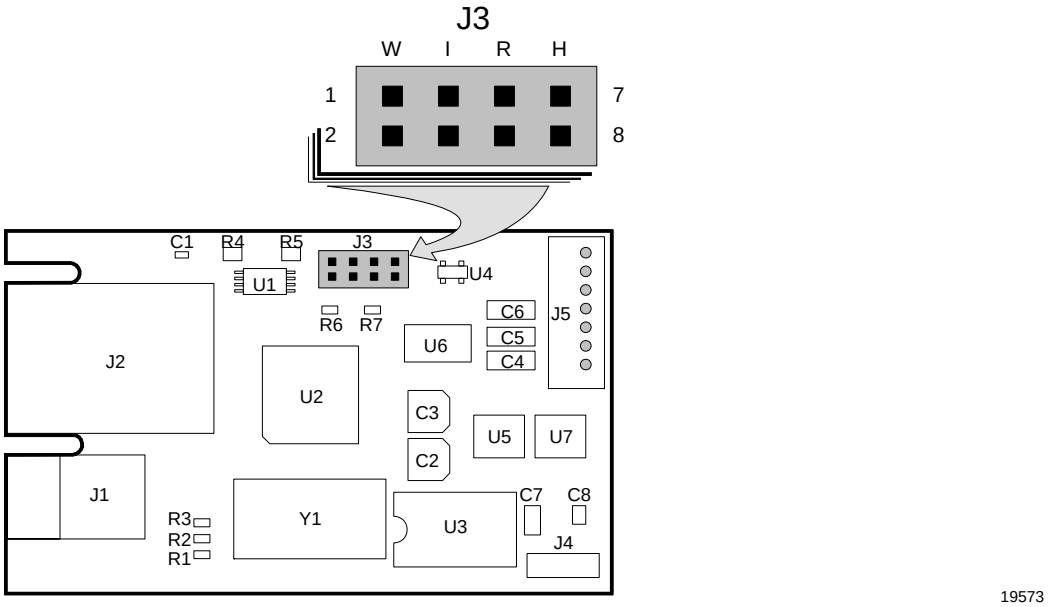
Connecting a RealScan 7883-1000 Scanner to a USB port on a host terminal requires a special cable. One end of the Dongle Adapter Cable connects to the host terminal. The other end has an Interface Box that contains a printed circuit board with all the necessary circuitry. The host terminal supplies power for this circuitry. An Interface cable connects the scanner to this box. A Power Supply connected to the scanner is required for all configurations.



J3 in the Interface Box on the end of the Dongle Adapter Cable contains a shunt that must be correctly installed for the host terminal. The cable is shipped from the factory with a shunt on pins 3 and 4. The following four positions are available.

- Pins 1 & 2 – Wedge
- Pins 3 & 4 – IBM
- Pins 5 & 6 – RS-232
- Pins 7 & 8 – HID

The cover on the Interface Box latches together along one side. Carefully pry open the latched edge to open the Interface Box. Check the shunt position on J3 and change as needed. Close the Interface Box cover.



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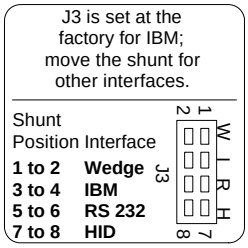
The following label is attached to the outside of the Interface Box. It identifies the various interface settings.


J3 is set at the factory for IBM; move the shunt for other interfaces.
Shunt Position Interface
1 to 2 Wedge
3 to 4 IBM
5 to 6 RS 232
7 to 8 HID
J3
1 2
W I R H
7 8

20001

7883-1200 or 1694/5 USB Interface Connection

Connecting a RealScan 7883-1200 or 1694/5 Scanner to a USB port on a host terminal requires a USB cable. No additional hardware is required. There are two cables available.

For connecting to IBM and NCR terminals a latching or USB Plus Power cable should be used.

1432-C895-0050 - Cable - USB IBM, Latching

For connecting to PC's, non-NCR/IBM terminals and NCR terminals without the USB Plus Power connector use cable below.

1416-C896-0050 - Cable-USB. Detachable

Auxiliary RS-232 Port

The NCR RealScan 7883 includes two Auxiliary RS-232 Peripheral Ports. The purpose of this feature is to permit other peripheral devices to connect to the host terminal through the RealScan 7883. This eliminates the need of the host terminal having additional RS-232 ports.

A typical use of this feature is to connect a hand-held scanner for scanning items too large to place on the checkstand. It also can provide a connection for some security tag deactivation systems.

Special programming is required for each peripheral device using a peripheral port. The connector is wired as follows.

Auxiliary RS-232 Port

Pin Number	Signal Name
1	+5 Vdc
2	NC
3	GND
4	TXD
5	RXD
6	+ 12 Vdc
7	CTS
8	RTS
9	Frame
10	Frame

NCR RealScan 7835/7836

- 1432-C140-0010 – Extension Cable

When a RealScan 7836 is attached to a RealScan 7883, the 7836 requires the following programming.

- Reset to serial (default values) – Label ZA
- Enable code ID (default values) – Label FB

NCR RealScan 7837

- 1416-C445-0025 – Interface Cable
- 1416-C397-0010 – Extension Cable

NCR RealScan 7832

- 7832-K102-V001 - 7832 to RS-232 DB9 Female Serial Cable (POS H/W handshake)
- 7832-K101-V001 - 7832 DB9 Male to RJ45 Cable adapter (78XX scanners)

NCR RealScan 7892

- 1432-C548-0030 – NCR 7892 Interface Cable

Special Installations

RS-232 Peripherals

The RealScan 7883 includes two auxiliary RS-232 ports. This permits other peripheral devices to connect to the host terminal through the RealScan 7883, eliminating the need of the host terminal having additional RS-232 ports. Programming of the ports is required. The various sequences and the action taken is given below for handheld scanners. All options should be programmed because the scanner could have been previously programmed for a different option.

Programming the RealScan 7883

Program Mode

4 0 1	Enables Hand Held port

** Port Selection **

4 0 2	Enables right hand port (Sensormatic)
4 0 3	Enables left hand port (Scale, closest to arrow/PS connection)

** 7883 Good Tone with auxiliary input **

4 0 4	Disables 7883 Tone with each scanned input
4 0 5	Enables 7883 Tone with each scanned input

** Scanner selection **

4 0 6	7835/7836/7837, programming information provided
4 0 7	Symbol LS4000, must be programmed properly
5 5 3	Enables port for 7832 format, programming information provided

Save & Reset

A typical use of this feature is to connect a hand-held scanner for scanning items too large to place on the checkstand. The 7892 may be programmed for compatibility with either the 7837 or 7832.

Additional Information

NCR RealScan 7892 Bi-Modal Presentation Scanner User Guide, 5005-0000-1182
NCR RealScan 7832 Operator's Guide, 497-0434255
NCR RealScan 7837 Imaging Scanner User's Guide, 497-0427357

RealScan 7892 Bi-Modal Presentation Scanner

You can connect a RealScan 7892 Bi-Modal Presentation Scanner to either Auxiliary RS-232 Port on the RealScan 7883.

Programming the RealScan 7892

Set the RealScan 7892 communication parameters to match the requirements of the RealScan 7883 auxiliary port.

7892 Programming requirements are provided below:

From standard RS-232 protocol

2 0 5 4 1 5	9600 baud, parity none, 1 stop, 8 data, RTS high wait CTS
1 6 D	Program label identifiers
4 0 6 1	C39 – 'a'
5 0 6 6	C128 – 'f'
6 0 6 2	Interleaved 2 of 5 – 'b'
End	Label Identifier programming completed
2 3 1 0 D	CR (0DH) terminating byte
(2 3 C 1 0 A	LF (0AH) terminating byte (CR LF) Include for 7837 format; skip for 7832 format)
Save & Reset	

You may also consult the ***Product Information / Features and Options / Auxiliary RS-232 Port***. For a chart showing the auxiliary port requirements refer to the NCR 7892 Bi-Modal Presentation Scanner User Guide for information about programming the RealScan 7892.

RealScan 7832 Programming

Programming should be done with the RealScan 7832 not connected to the scanner. Scan the tags listed below from the 7832 Operator's Guide in order to program the 7832 for communicating with a 7883.

NCR Factory Default

Disable ACK

Select Handshake Input

RealScan 7837 Programming

Program the RealScan 7837 according to the following chart. Refer to the RealScan 7837 User's Guide for more specific information.

Scan barcodes in order. If a triple beep is emitted from the scanner (7837), start over with the top barcode.

FACTORY DEFAULT

1.

RS232, 7 DATA, 1 STOP, SPACE PARITY

2.

Prefixes / Code 39 - a, Code 128 - f, Code I 2of 5 - b

3.

Default Data Format

1.

UPC-A Prefix A

2.

UPC-E Prefix E

3.

EAN 13 Prefix F

4.

EAN 8 Prefix FF

5.

Step 2 - Setting Program Parameters and Verifying Host Connection

Now you need to turn on the NCR RealScan 7883. First load new firmware if needed then make any necessary program changes. Next scan a few tags to verify that the RealScan 7883 is communicating with the host terminal.

Note: The NCR 7883-1000 firmware cannot be flash. Only the NCR 7883-1200 or 1694/5 firmware can be flash.

Turning on the RealScan 7883

The RealScan 7883 does not have an On/Off switch. Use the circuit breaker switch in the checkstand that supplies power to the unit as the On/Off switch. Put this switch in the On position.

Flash Latest Firmware – 7883-1200 or 1694/5

Note: Firmware Flashing – Firmware flashing is only available on NCR RealScan scanners that have a Super ASIC Digital Board. The Super ASIC Digital Board models all have a 2 in the second digit of the model number. For example: 7872-x2xx, 7875-x2xx, 7876-x2xx, 7883-x2xx. Older NCR Scanners have firmware chips that cannot be updated by flashing. These chips must be replaced to change the firmware.

Although the latest firmware is loaded when the RealScan 7883-1200 or 1694/5 is manufactured, newer firmware can be released after the unit is manufactured but before it is installed. NCR recommends that you check the number of the firmware in the RealScan 7883-1200 or 1694/5 and compare it with the latest firmware available on www.NCR.com.

To download the latest Drivers and Patches for a NCR RealScan scanner:

1) Go to http://www.ncr.com
2) On the left side of the page, under **Resources**, click **Support**.
3) At the bottom of the **Support** page, under **Services**, click **Drivers and Patches**.
4) On the **Drivers and Patches** page, under "**Drivers and Patches**" locate and click **Retail Support Files**.
5) On the **RETAIL SUPPORT FILES** page, locate and click **Retail Platform Software**.
6) On the **RETAIL PLATFORM SOFTWARE** page, the latest drivers and patches for NCR RealScan scanners are available for downloaded. Locate **Scanner – Scanner/Scales** and select the correct scanner model.

To identify the firmware already in the scanner, scan the **Diagnostic Mode**, **Hex 4**, & **Hex A** programming tags. These must be the first tags scanned after applying power to the unit. The RealScan 7883 gives a voice message containing the 497-xxxxxxx number of its firmware. Compare this number with the number of the firmware file on www.NCR.com. Perform the firmware flashing procedure if the 497-xxxxxxx number of the firmware file on www.NCR.com is higher than what is already loaded in the RealScan 7883. Refer to the ***NCR RealScan 7883 User Guide*** for firmware flashing procedures.

Programming the RealScan 7883

Caution: Some host terminals can corrupt the RealScan 7883 program if they are running and are connected to the RealScan 7883 while you are making program changes. Either turn off the host terminal or disconnect the interface cable before scanning any programming tags.

Programming Defaults

Scanning the **Default** programming tag sets most program parameters to the default programmed at the factory. The original defined default values are shown in the chart below. However, some parameters do not have default values so they are not changed, they stay as they are programmed.

01 Communications Protocol	
Protocol	No default value – remains as programmed
11 Good Read Tone	
Tone On/Off	On
Tone Frequency	Choice 6 of 8 Levels
Tone Length	Choice 3 of 16 Levels
Tone Volume	Choice 4 of 8 Levels
Not-On-File Volume	Choice 2 of 8 Levels
12 Timers	
Lockout Time	900 Milliseconds
Restart Lockout Timer	Off
Active Time	15 Minutes
13 Bar Codes – 1	
UPC/EAN	Enable
Extend UPC-A To EAN-13	Disable
Extend UPC-E To UPC-A	Disable
Periodical Codes	Disable
Periodical Code Extension	2-Digit & 5-Digit
Send Data	Data As Decoded
14 Bar Codes – 2	
Code 39	Disable
Minimum Characters Allowed	8
Full ASCII	Disable
Check Digit Present	Disable
Transmit Check Digit	Disable
Allow 1- or 2-Character Tags	Disable
15 Bar Codes – 3	
Interleaved 2 of 5	Disable
Bar Code Length	Range Check
Value 1	08
Value 2	16
Check Digit Present	Disable
Transmit Check Digit	Disable
17 Bar Codes – 4	
Code 128	Disable
Minimum Data Characters	3
UCC 128	Disable

18 Bar Codes – 5

RSS Enable	Disable
Scans Required On RSS 14	1
Scans Required On RSS E	1
UCC1128 Emulation Mode	Normal Mode

16 Label Identifiers

Identifier Type	Default Prefix
Common Byte 1	5D
Common Byte 2	42
Bar Code Type	No Default value – remains as programmed

	UPC-A	UPC-E	EAN-8	EAN-13	Code 39	Code 128	I 2 of 5
Common Byte	0	0	0	0	2	2	2
Unique Identifier	41 Hex	45 Hex	46 Hex	46 Hex	31 Hex	33 Hex	32 Hex

20 RS-232 Parameters – 1

Baud Rate	9600
Parity	Odd
Stop Bits & Character Length	1 Stop Bit, 7-Bit Character
Handshake	RTS High Wait For CTS

21 RS-232 Parameters – 2

BCC Options	Enable if Scale installed
Interface Control	None
Check Digit	Enable UPC-A, Enable EAN-8, Enable EAN-13, Disable UPC-E

22 RS-232 Prefix Byte

Prefix Byte	Disable
ASCII Code	02

23 RS-232 Terminator Byte

Terminator Byte	Enable
ASCII Code	03

24 RS-232 Communications Options

Message Delay	10 Milliseconds
Scanner or Scanner/Scale Format	Enable if Scale installed
Normal Or Eavesdrop Mode	Normal Mode

32 Miscellaneous Parameters

IBM Tone Control	Enable
IBM Rexmit Control	3 Times
Enable / Disable Voice Messages	None
IBM Tag Data Format	Hex

Programming for USB Connection

The RealScan 7883 Scanner must be properly programmed for USB. Programming and cabling depends on whether the unit is a 7883-1000 or 7883-1200 or 1694/5. The 7883-1000 uses the USB Dongle connection to the host terminal while the 7883-1200 or 1694/5 uses a straight through cable. The programming also depends on the type of host terminal being used.

RS-232 Communications

The 7883-1000 communicates with the USB dongle using RS-232. Therefore, the 7883-1000 uses standard RS-232 communications (1 0 5). The RealScan 7883-1200 or 1694/5 Scanner outputs USB and uses a cable which connects directly to the terminal. It must be programmed for NCR/232- USB. Other parameters may be set as required by the host terminal. Set the required program parameters by scanning the following sequence of programming tags. These must be the first tags scanned after supplying power to the unit.

7883-1000

1. **Default –** sets all parameters to standard default values.
2. **Programming Mode –** puts scanner in base programming state.
3. **Hex 1**, **Hex 0**, **Hex 5 –** sets the required RS-232 programming parameters.
   - RS-232 communications protocol
   - 9600 baud
   - Odd parity
   - 1 stop bit, 7-bit character
4. Change any other parameters as required by the host terminal.
5. **Save and Reset –** saves the program just entered and resets the scanner.

7883-1200

1. **Default –** sets all parameters to standard default values.
2. **Programming Mode –** puts scanner in base programming state.
3. **Hex 1**, **Hex 0**, **Hex E**, **Hex 0 –** sets the required NCR/232 USB programming parameters.
4. Change any other parameters as required by the host terminal.
5. **Save and Reset –** saves the program just entered and resets the scanner.

The host terminal software may now be configured to use the communication port assigned by the IO Networks driver in the terminal when the connection is made to USB. Note that it is required to obtain the IO Networks software which is available from the NCR website.

IBM Communications

The host terminal should assign the port and associate the scanner with the application when the USB connection is made. When programming a RealScan 7883 for IBM USB communications, all parameters are set to the standard default values, and the communications protocol is set to IBM USB. This is accomplished by scanning the following sequence of programming tags. These must be the first tags scanned after supplying power to the unit. Note that both the 7883-1000 and 7883-1200 or 1694/5 use the same programming sequences. However, the 7883-1000 must use a USB dongle, while the 7883-1200 or 1694/5 uses a USB cable. The jumper in the USB Dongle for 7883-1000 scanners must also be jumpered for IBM (See figure above).

7883-1000 and 7883-1200 or 1694/5

1. **Default** - sets all parameters to standard default values.

2. **Programming Mode** tag - puts scanner in base programming state.
3. **Hex 1**, **Hex 0**, **Hex D** - sets the communication protocol to IBM USB.
4. **Hex 4**, **Hex 8**, **Hex 5 –** turns off configuration message processing.
5. Change any other parameters as required by the host terminal.
6. **Save and Reset –** saves the parameters just entered and resets the RealScan 7883 Scanner

Reduced Space Symbology

Reduced Space Symbology (RSS) permits more data to be recorded in a smaller physical space. This is accomplished by encoding the data in large symbol characters rather than encoding each data character separately. Also, no quiet zone is required around the symbols. The RealScan 7883 can read four types of RSS bar codes.

RSS14

RSS-14 is a linear symbology that encodes 14 UCC/EAN digits. This structure provides four segments that can be scanned and decoded separately, then reconstructed. The total symbol contains 96 modules combined into 46 elements (bars and spaces).

0100012345678905

19254

RSS-14 Stacked

RSS-14 Stacked is a 2-row format. The bottom row is higher than the top row and the two are separated with a separator pattern. The stacked format is used when not enough linear space is available. A typical use is marking produce in a grocery store.

0100991234567899

19255

RSS Expanded

RSS Expanded is a variable length linear symbology. It can encode 74 numeric or 41 alpha characters. RSS Expanded can be scanned and decoded in up to 22 segments and then reconstructed.

9987 6543 2101 2345 6789 8888

19256

RSS Expanded Stacked

RSS Expanded Stacked is similar to RSS-14 Stacked except it uses the RSS Expanded format for creating the symbol.

0192 1234 5698 7457 3202 0000 9939 0200 296

19257

Enabling RSS

1. Turn on the circuit breaker to the RealScan 7883.
2. Enable the Reduced Space Symbology feature by scanning the following sequence of programming tags. These must be the first tags scanned after applying power to the unit.
   - **Programming Mode** - Puts the RealScan 7883 in the Programming Mode.
   - **Hex 1**, **Hex 8**, **Hex A**, **Hex 3.**
   - **Save and Reset** - Saves the parameter setting.

Disabling RSS

1. Turn on the circuit breaker to the RealScan 7883.
2. Enable the Reduced Space Symbology feature by scanning the following sequence of programming tags. These must be the first tags scanned after applying power to the unit.
   - **Programming Mode** - Puts the RealScan 7883 in the Programming Mode.
   - **Hex 1**, **Hex 8**, **Hex A**, **Hex 0.**
   - **Save and Reset** - Saves the parameter setting.

Making Other Program Changes

If you still need to make program changes after setting the communication parameters, you can enter information directly from the Programming Worksheets. The Programming Worksheets, located at the back of this book, identify all the available program parameters. Each worksheet relates to a specific programming mode. Most programming options have defaults, identified by a heavy box, that are determined at the factory. Scanning the **Default** tag as the first tag after applying power to the RealScan 7883 sets the parameters to these values.

Changing the RealScan 7883 program is accomplished by scanning the proper sequence of programming tags, which are included with the unit. Following are three major steps for making program changes.

1. Enter the Base Programming State by scanning the **Programming Mode** tag as the first tag after applying power to the RealScan 7883.
2. Select a Programming Worksheet and enter its parameter data by scanning the appropriate Hex tags.
3. Save the program by scanning the **Save and Reset** tag.

Note: In most instances the factory determined defaults are the correct parameter setting. However, if you do need to make changes, it is recommended that you first set all parameters to default values, then make any necessary changes to the appropriate parameters.

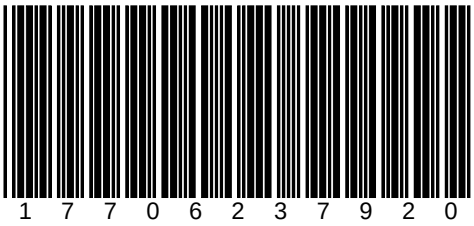
Scan Sample Tags

Now you should scan some sample tags to verify that the RealScan 7883 is communicating with the host terminal. Following are four good tags that you can use. After verifying that the RealScan 7883 is communicating properly with the host terminal, continue with the installation.

Note: For maximum performance, full size labels must be used. The *UPC Symbol Specification Manual* gives the exact size requirements for UPC labels. If the bar height is less than specified, more precise presentation to the scanner is required, reducing productivity.

UPC-A

Code 39

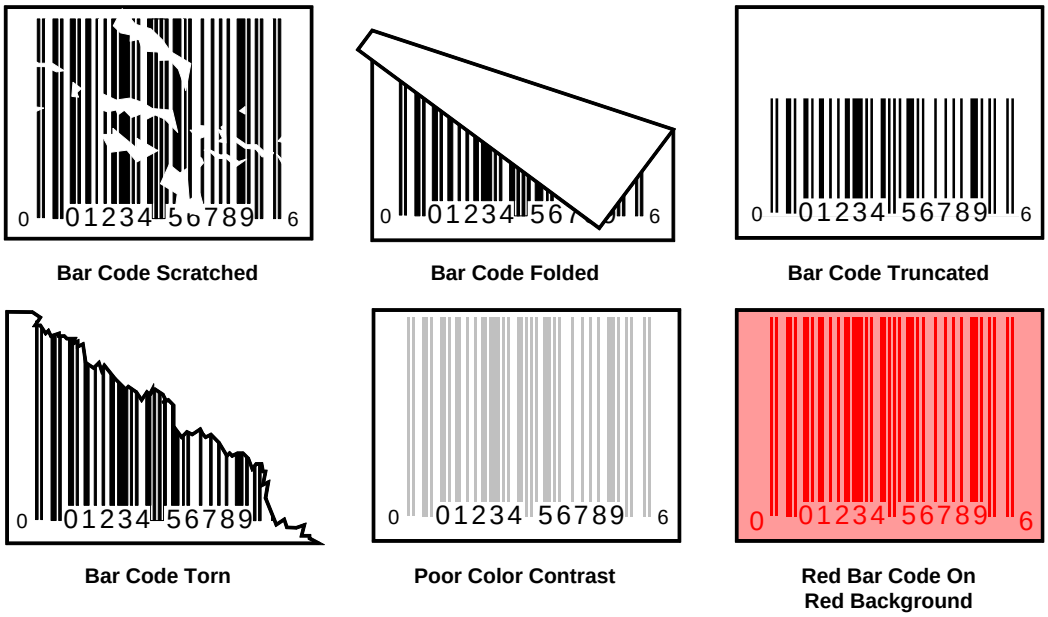


Code 128

Interleaved 2 of 5

Determining Label Quality

Many labels in a typical retail environment are unreadable. The following illustration shows some of the common problems. Vendors and printers regularly supply products to the market with bar codes that are overprinted, underprinted, or truncated. Some labels have missing margins. Others may be printed around the corners of packages, or on media not likely to remain flat when picked up.



Bar Code Scratched | **Bar Code Folded** | **Bar Code Truncated**

Bar Code Torn | **Poor Color Contrast** | **Red Bar Code On Red Background**

R0026

The readability of a label depends on variables such as size, placement, color, paper type, ink viscosity, and package coatings. The middle of a printing run can yield erroneous labels due to the many variants involved. In particular, poor color contrast and marginal print quality can make a label hard to read.

UPC bar code requirements are identified in the **UPC Symbol Specification Manual** that is published by the Uniform Code Council, Inc. Contact the following for a copy of this document.

Uniform Code Council, Inc.
8163 Old Yankee Road, Suit J
Dayton, OH 45458
Phone: 513-435-3870

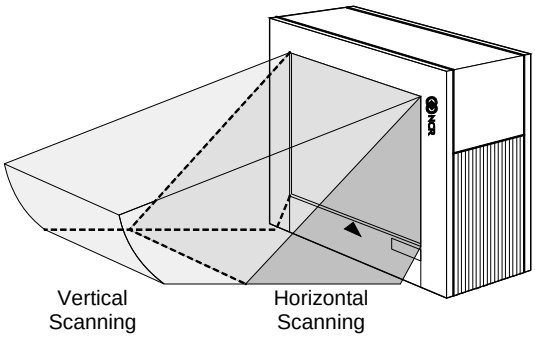
Contact the following for information on Code 39 or "3 of 9" bar code labels.

AIM – USA
634 Alpha Dr.
Pittsburgh, PA 15238-2802
Phone: 412-963-8588

EAN bar code requirements are identified in **General Specification for Article Symbol Marking**, Copyright EAN-1977.

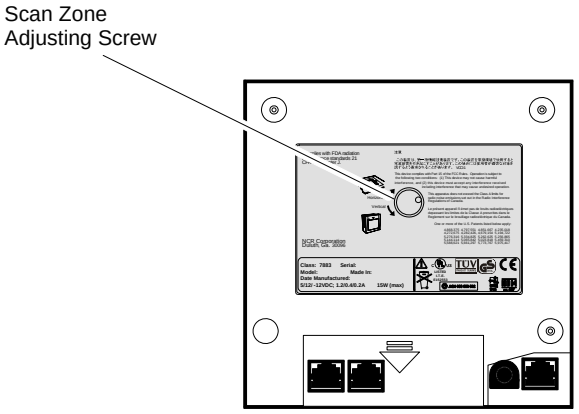
Step 3 - Setting RealScan 7883 Scan Zone

The scan zone on a NCR RealScan 7883 Scanner can be set to horizontal or vertical. Changing the scan zone changes the angle of the scan lines coming from the scanner.



16011

You change the scan zone by turning the screw on the bottom of the cabinet. Be sure to turn the screw all the way in one direction or the other, do not leave it turned part way.

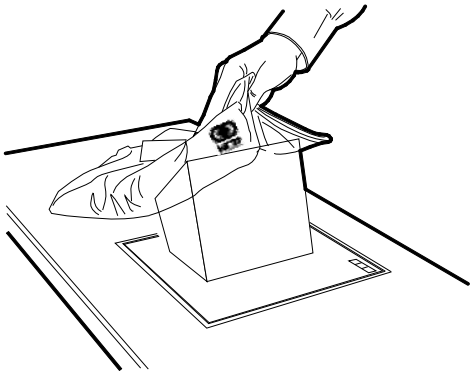


20152

When selecting the scan zone, you must also consider how you are mounting the scanner, horizontally or vertically. This permits you to optimize the performance for your particular installation. Following are four common installations that identify the installation type and the scan zone setting. They are given in order of scanning efficiency with the first being the most efficient, and the last being the least.

Horizontal - Pass-by Scanning

This installation provides the most efficient way to scan items. It is typically used in checkouts where speed is extremely important. In this installation, the operator slides items from the input area on the checkstand, across the scanner, and to the output area on the checkstand.



Typical Installation -
Hyper/Super Market

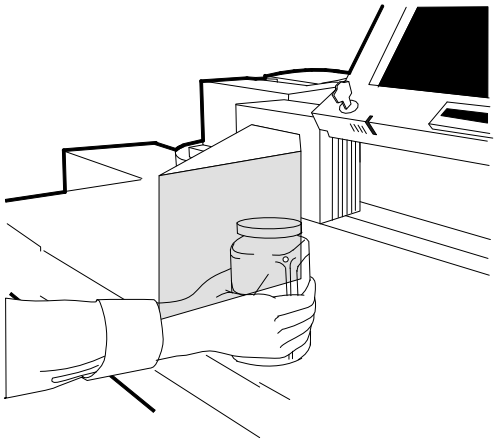
Scan Zone - Horizontal

Installation - Horizontal

16012

Vertical - Pass-by Scanning

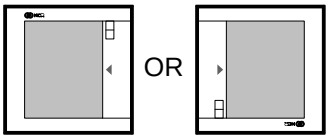
This installation is used where the checkstand is not large enough to mount the scanner horizontally, but pass-by scanning is needed. In this installation, the operator slides items from the input area on the checkstand, past the scanner, and to the output area on the checkstand.



Typical Installation -
Drug Stores
Super Market in Europe
With Operator Seated

Scan Zone - Horizontal

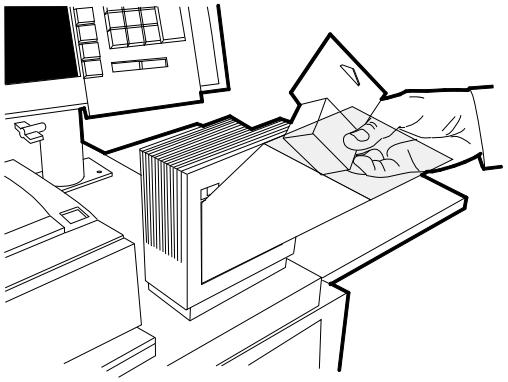
Installation - Vertical



16013

Vertical - Presentation Scanning from Top

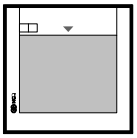
This installation is used on small checkout counters that do not have enough room for pass-by scanning. Here the operator picks up the item, presents it toward the top of the scanner, and then bags the item all in one motion.



Typical Installation - Specialty Store

Scan Zone - Vertical

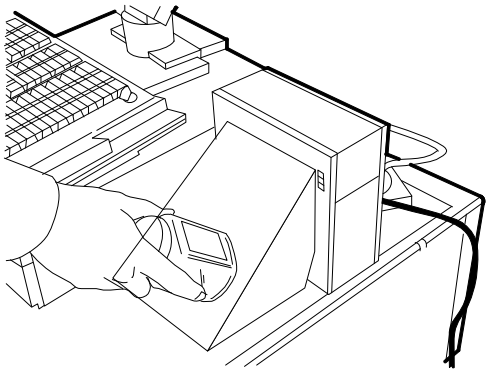
Installation - Vertical



16014

Vertical - Presentation Scanning from Bottom

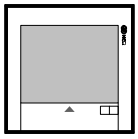
This installation is used on very small checkout counters. In this installation the operator picks up the item, presents it toward the bottom of the scanner, and then bags the item all in one motion.



Typical Installation - Convenient Store

Scan Zone - Vertical

Installation - Vertical



16015

Step 4 - Mounting the RealScan 7883

The RealScan 7883 can sit vertically on the checkstand, be mounted vertically in a Vertical Mounting Bracket, or be mounted horizontally in the checkstand. If it is mounted horizontally in the checkstand, it must be fastened to a Plastic Top Plate, or possibly be positioned underneath a glass surface. The plastic scan window in the RealScan 7883 cabinet is not designed to have items slid over it.

Note: Improper installation can void the warranty.

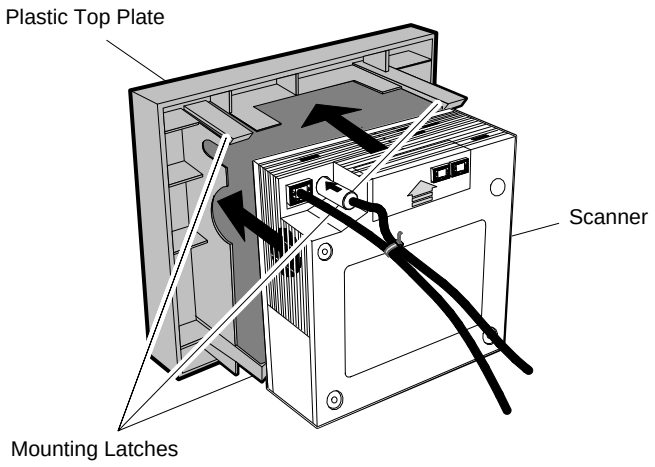
Rubber Feet

The NCR RealScan 7883 Scanner is supplied with rubber feet that are attached to the sides of the cabinet. This permits the scanner to sit on the checkstand in a vertical position without being mounted to the Vertical Mounting Bracket.

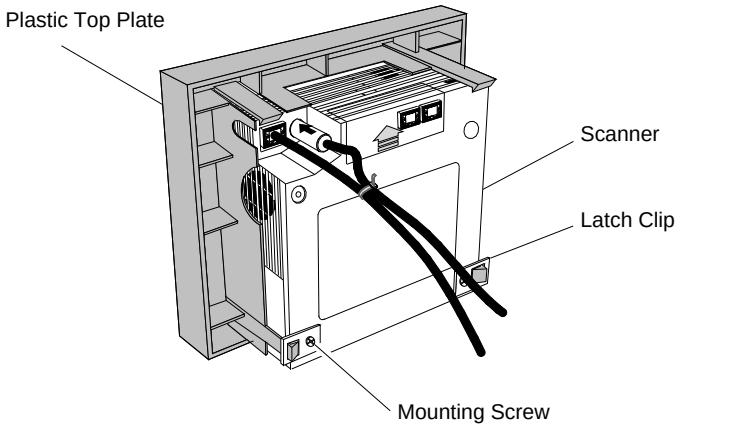
Plastic Top Plate

Your installation may use a Plastic Top Plate. Make sure no rubber feet are attached to the cabinet.

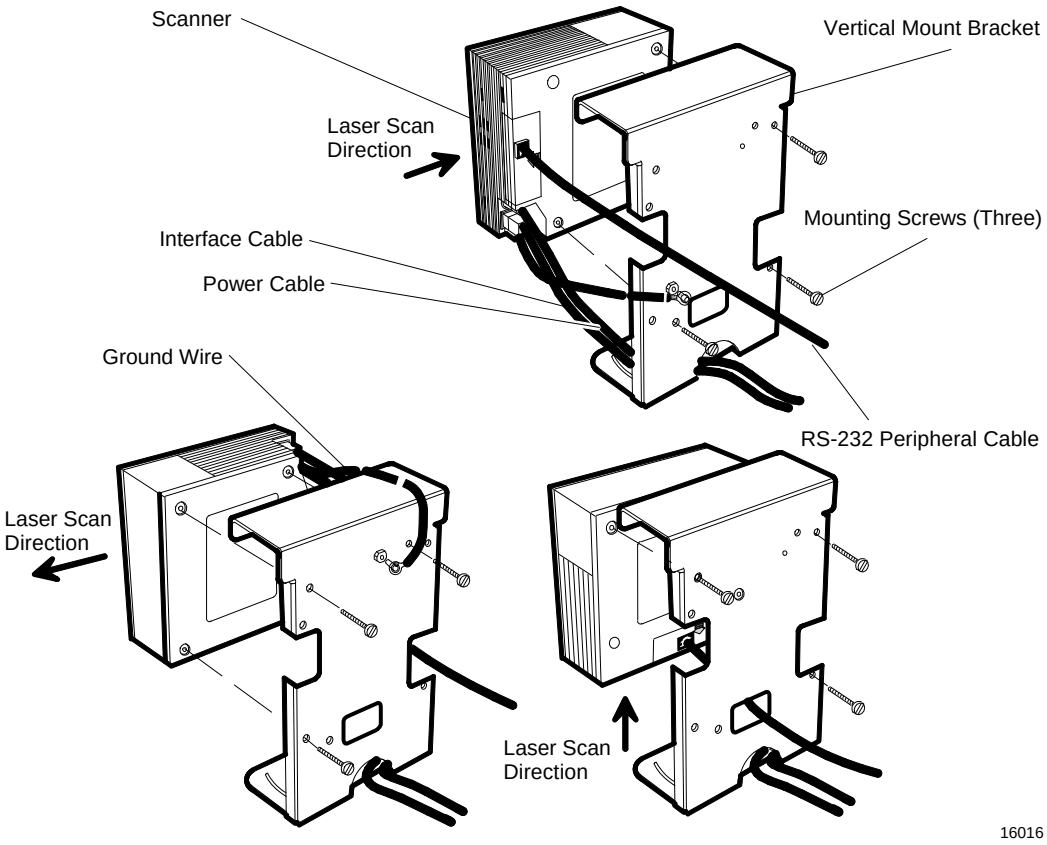
1. Properly align the scanner with the Plastic Top Plate.
2. Fasten the scanner to the Top Plate making sure that all four latches are securely latched around the scanner.



3. Install two Latch Clips – **horizontal installation only**. These clips secure the RealScan 7883 to the Plastic Top Plate in case something falls on the assembled unit.

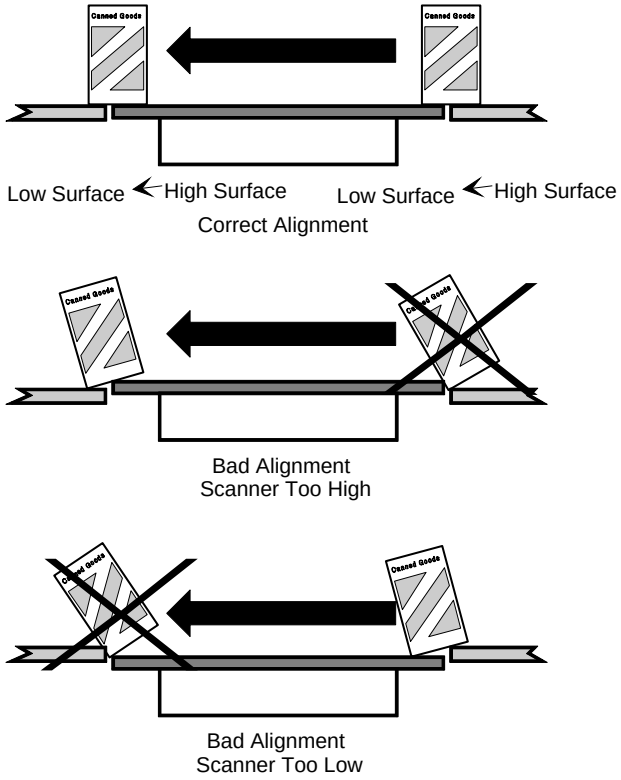


Vertical Mounting Bracket



Checkstand Cutout

1. Put the RealScan 7883 into the hole in the checkstand. Diagrams *in NCR RealScan 7883 Specifications* show the various dimensions of the hole.
2. Align the RealScan 7883 to the Checkstand. The leading edge of the Top Plate must be flush or up to 1/16 in. (0.15 cm) below the top of the checkstand. The trailing edge of the Top Plate must be flush or up to 1/16 in. (0.15 cm) above the top of the checkstand.



Checkpoint Cable

If you are installing a RealScan 7883 Scanner, with the Checkpoint feature, on a Vertical Mounting Bracket, route the Checkpoint Cable along side the Interface Cable.

Note: If the installation includes the Checkpoint feature, a representative from Checkpoint must connect the Checkpoint Cable to the Checkpoint equipment after you install the RealScan 7883.

Cable Clamps

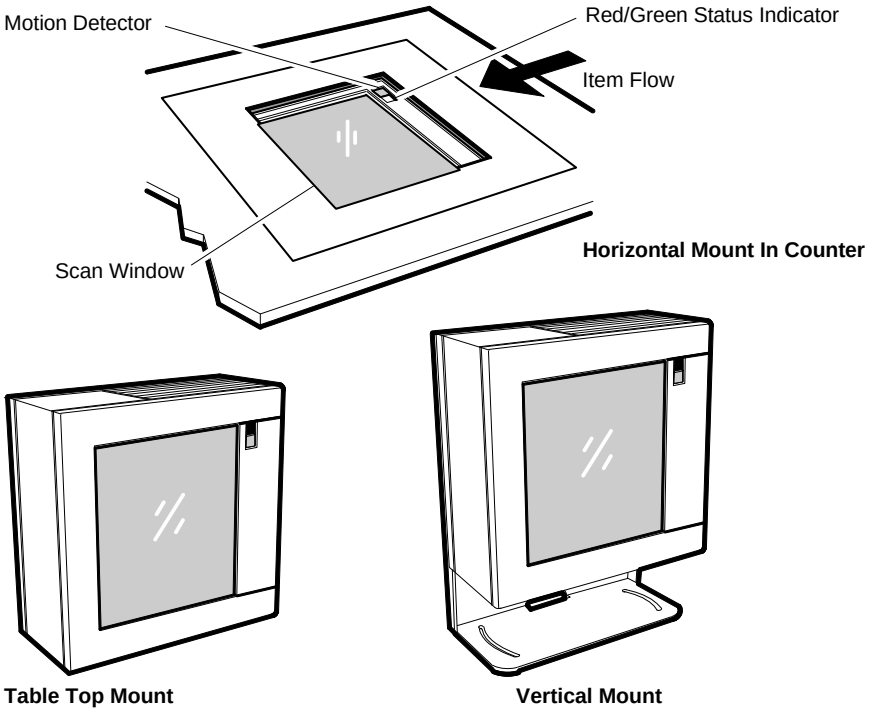
The RealScan 7883 is supplied with two Cable Clamps. Install these clamps under the checkstand as needed to support the cables and keep them out of the operator's way.

Operating the Scanner

The NCR RealScan 7883 is a fixed position device that is not handled or moved by the operator during operation. It is maintained and serviced by trained service personnel only. The operator has no access to any laser module components.

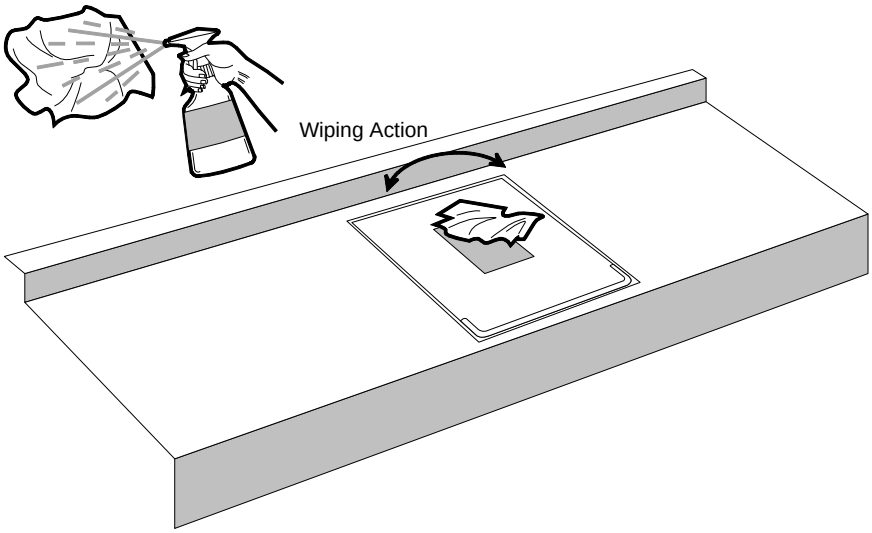
The RealScan 7883 does not have a power switch. However, you turn it on and off by using the circuit breaker switch, located in the checkstand, that supplies power to the unit. Be sure this switch is in the On position.

The Red Indicator is on when the RealScan 7883 is ready. When the scanner reads a bar code, the Red Indicator turns off and the Green Indicator turns on. Nothing happens if the bar code is not read. The correct way to do pass-by scanning is to just slide the item past the scan window without lifting the item. With presentation scanning, you lift the item, move it straight toward the scan window, then bring the item back away from the scanner.



Cleaning the Scanner

Keeping the scan windows clean helps keep the read rate exceptionally high. During normal operation the scan windows get dirty, and if you permit the dirt to accumulate, performance degrades to the point where the scanner cannot read bar codes. Use a soft cloth to clean the scan windows, using a common, non-abrasive, liquid window cleaner. Be sure to spray the cleaner onto the cloth, not directly onto the scanner.



15937

Correcting Scanner Problems

When the RealScan 7883 is first turned on, several diagnostic tests are run to check the status of various components. If a failure occurs, a series of beeps and flashes of the Green Status Indicator identify it. The number of beeps (flashes) identifies the problem. The problem indication is repeated continuously with a 3-second pause between each indication series. Following the first problem indication, the beeps are turned off and only the Green Status Indicator flashes to identify the problem.

If the diagnostics identify a problem, you must have the scanner repaired. Refer to *Obtaining Technical Assistance* on page 3. Although several conditions can be identified, following are the most common.

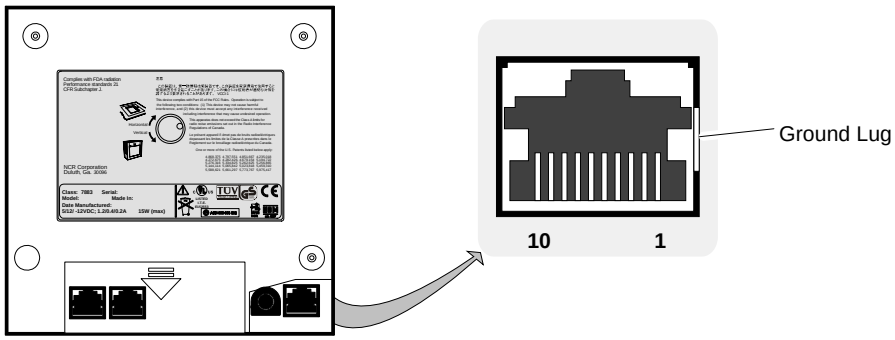
Green Status Indicator	Tones	Problem	Suspect Component
2 Flashes	2 Beeps	RAM – Write / Read failure	Printed Circuit Board
3 Flashes	3 Beeps	Spinner motor running when it should be off	Printed Circuit Board
4 Flashes	4 Beeps	Interface Failure Code received	Printed Circuit Board
5 Flashes	5 Beeps	Motor running too slow	• Motor • Printed Circuit Board
6 Flashes	6 Beeps	EEPROM failure – cannot load contents into memory	Printed Circuit Board
7 Flashes	7 Beeps	No +12 Vdc or –12 Vdc	Power Supply
8 Flashes	8 Beeps	Laser Diode On when it should be Off	Printed Circuit Board
9 Flashes	No Beeps	Scanner does not see Terminal power	Terminal powered off or cable not connected.
11 Flashes	11 Beeps	Laser Diode Off when it should be On	Printed Circuit Board
12 Flashes	12 Beeps	ROM sum check failure	Printed Circuit Board

There are other conditions that are not identified by the diagnostics when you turn on the RealScan 7883. The following chart identifies some of the more common problems.

Problem	Status Indicators	Tone	Possible Cause	Corrective Action
Scanner does not operate	Red Off Green Off	Off	No power to the unit	• Check the electrical outlet for proper power • Verify that AC Power Cord is properly connected
Scanner is quiet	Red & Green flashing continuously	Off	Sleep mode	• Pass anything in front of the motion detector
Scanner reads only two labels	Red flashing Green Off	Off	Communications is IBM 468x and scanner is off-line	• Verify that IBM host is turned on • Verify that IBM host is recognizing the RealScan 7883 • Verify that the interface cable is properly connected
Scanner reads only two labels	Red On Green Off	Off	NCR 7883 is not communicating with the host	• Check for expected communication protocol • Check host terminal for proper operation • Check interface cable connections
Scanner does not read any labels	Red flashing rapidly	Off	Scanner has been disabled by the host terminal	• Terminal should enable scanner later in the transaction
Scanner does not read any labels	Red On Green Off	Off	Internal failure	• Remove power from the RealScan 7883 and then supply again • Have scanner repaired

Interface Information

Interface Connector



Pin	IBM	RS-232	WEDGE
1	NC	DSR (IN)	NC
2	NC	DTR (OUT)	KBCLK/
3	NC	TXD (OUT)	NC
4	NC	RTS (OUT)	NC
5	NC	CTS (IN)	NC
6	NC	RXD (IN)	NC
7	TMPWR	NC	PCCLK/
8	TRA	NC	PCDATA/
9	TRB	NC	
10	GND	GND	

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Most Common Interface Cables

- 1416-C019-0040 RS-232 to PC
- 1432-C152-0040 IBM port 17
- 1416-C070-0040 IBM port 9A/9E
- 1432-C676-0030 PS/2 Keyboard wedge
- 1416-C895-0050 USB IBM/NCR Plus Power/Latching
- 1416-C896-0050 USB PC's and Non –IBM/NCR terminals Detachable/Non-Latching

Communications Protocol

The Communications Protocol function identifies the communications protocol the RealScan 7883 is using. Scan the **Diagnostics Mode** and **Hex 3** programming tags (must be first tags scanned after applying power). Three beeps sound after scanning the **Hex 3** tag, identifying the programming tag. Next, the Status Indicator flashes green and a series of beeps sound that identify the communications protocol. Use the following table to determine the communication protocol.

Tone	Communication Protocol
3 Beeps	IBM 468x (4A)
4 Beeps	IBM 468x (4B)
6 Beeps	RS-232
? Beeps	Keyboard Wedge

Scan the **Hex 3** tag to repeat; remove power to end.

Programming Worksheet

10 Communications Protocol (Options 4 and B not supported yet)

Protocol

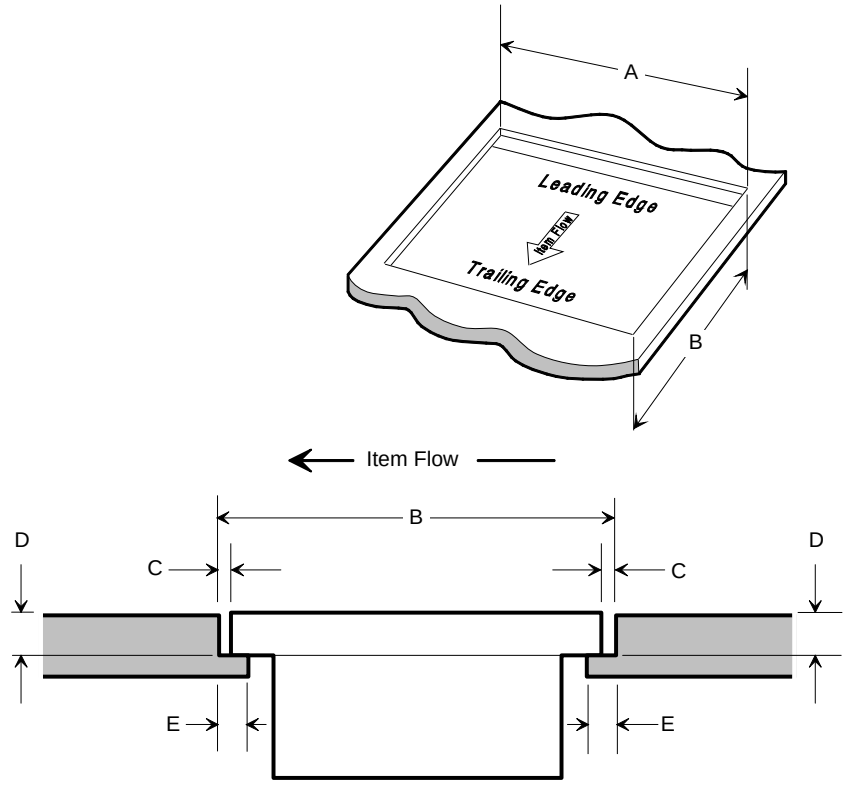
3	4	5
IBM Slot Scanner	IBM Hand-Held Bar Code Reader	RS-232

B	D	E 0
IBM 1520 Bar Code Reader	IBM USB	NCR (RS-232) USB

20552

NCR RealScan 7883 Specifications

Checkstand Hole – RealScan 7883 Horizontal Mount

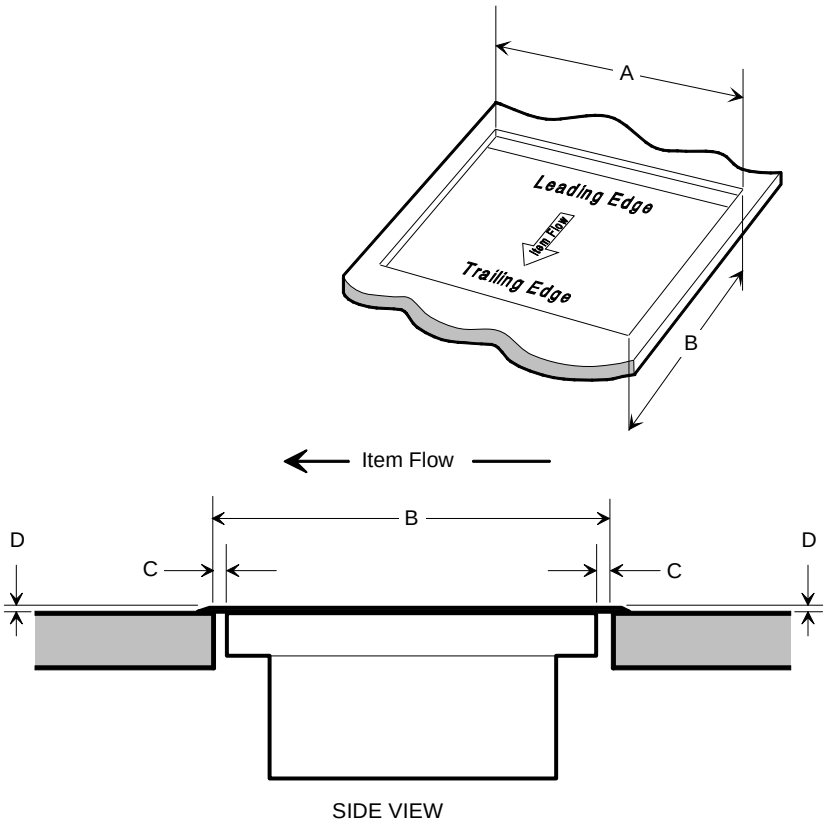


SIDE VIEW

Features	A	B	C	D	E
F062	8 5/8 in. 21.91 cm	8 5/8 in. 21.91 cm	1/16 in. 0.16 cm	1 1/16 in. 2.70 cm	1/2 in. 1.27 cm
K011 (7852 Mount)	9 5/8 in. 24.45 cm	11 5/16 in. 28.73 cm	1/16 in. 0.16 cm	1 1/16 in. 2.70 cm	1/2 in. 1.27 cm
K010 (7820 Mount)	20 1/8 in. 51.12 cm	11 5/8 in. 29.53 cm	1/16 in. 0.16 cm	13/32 in. 1.03 cm	7/16 in. 1.11 cm

11981

Checkstand Hole – RealScan 7883 Flat Mount



SIDE VIEW

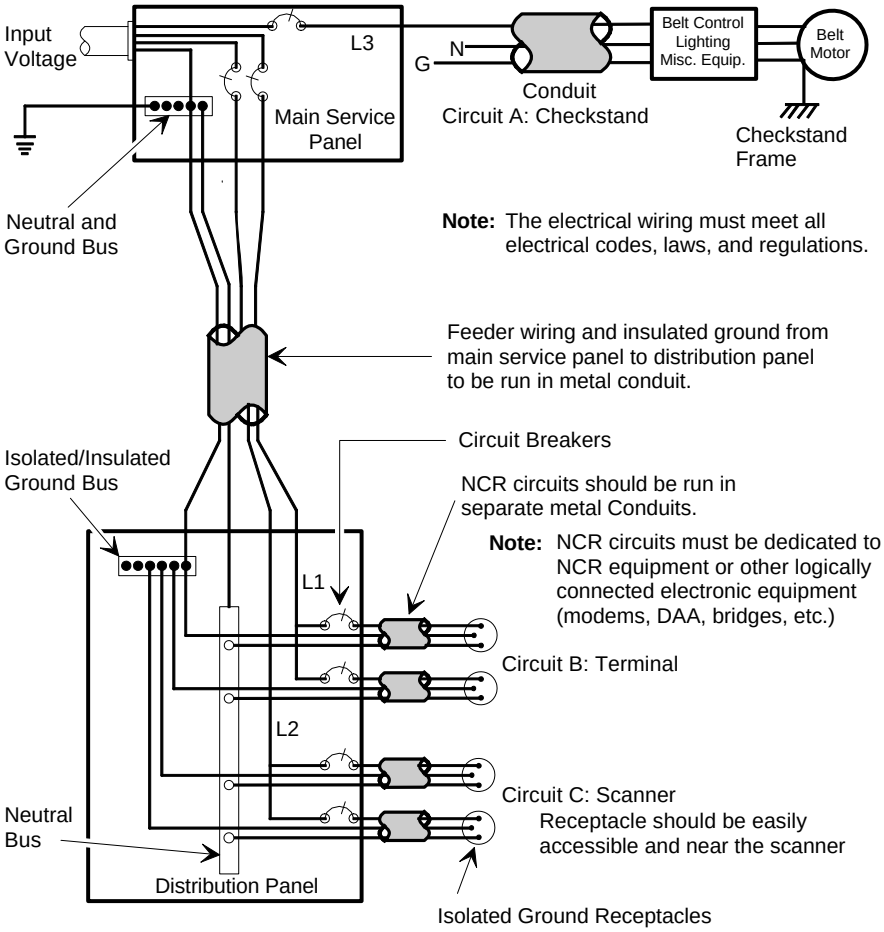
Features	A	B	C	D
K012	8 3/4 in. 22.22 cm	8 3/4 in. 22.22 cm	1/16 in. 0.16 cm	1/16 in. 0.16 cm

11993

Ventilation Requirements

The NCR RealScan 7883 is designed to operate without an exhaust fan in the checkstand; however, there must be adequate convection air flow. The ambient temperature inside the checkstand cannot be higher than 104° F (40° C). Also, the ambient temperature inside the checkstand cannot be higher than 12.6° F (7° C) above the ambient temperature outside the checkstand. For example, if the ambient temperature outside the checkstand is 76° F (24.4° C), the ambient temperature inside the checkstand cannot be greater than 88.6° F (31.4° C). If the checkstand contains other heat producing equipment, you may need to use forced air to keep the temperature within the specified range. However, air coming into or leaving the checkstand **MUST NOT** enter or exit past the RealScan 7883.

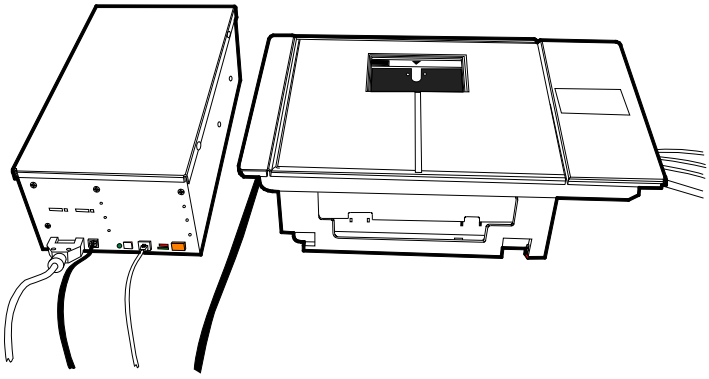
Electrical Wiring


Input Voltage
L3
N
G
Belt Control Lighting Misc. Equip.
Belt Motor
Conduit
Circuit A: Checkstand
Main Service Panel
Checkstand Frame
Neutral and Ground Bus
Note: The electrical wiring must meet all electrical codes, laws, and regulations.
Feeder wiring and insulated ground from main service panel to distribution panel to be run in metal conduit.
Circuit Breakers
Isolated/Insulated Ground Bus
NCR circuits should be run in separate metal Conduits.
Note: NCR circuits must be dedicated to NCR equipment or other logically connected electronic equipment (modems, DAA, bridges, etc.)
L1
Circuit B: Terminal
L2
Circuit C: Scanner
Receptacle should be easily accessible and near the scanner
Neutral Bus
Distribution Panel
Isolated Ground Receptacles

Installation Type	Input Voltage	L1, L2	Circuit Breakers
U.S., Canada, & Japan	100Vac to 120Vac	100Vac to 120Vac	Standard single-pole; value determined by type of device branch and by electrical code.
International	220Vac to 240Vac	220Vac to 240Vac	
European	220Vac	220Vac	European double-pole.

20254

NCR RealScan 7883, METTLER TOLEDO® Scale, & Sensormatic ScanMax™HS



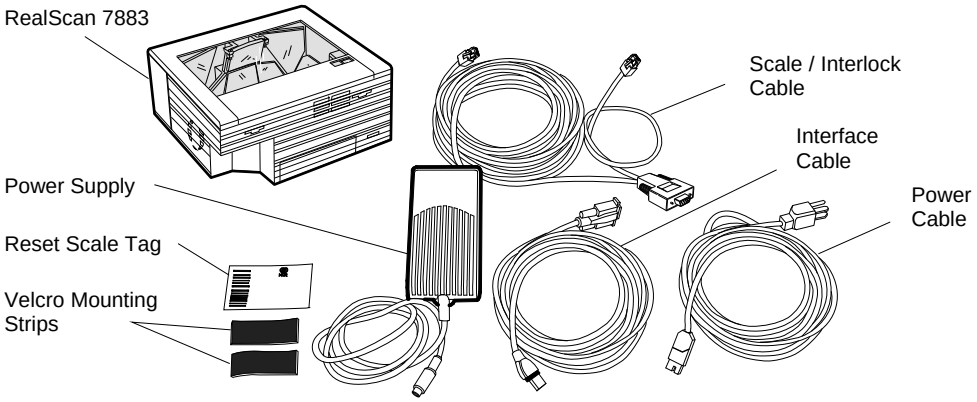
20203

The NCR RealScan 7883, METTLER TOLEDO® 8217AS, & Sensormatic ScanMax™HS system is composed of components from three companies. NCR manufactures the scanner, METTLER TOLEDO manufactures the scale, and Sensormatic manufactures the tag deactivation system. Depending upon the customers' requirements, any one of these companies, or a combination of them, may fill an order for the system and may install or service it. Therefore, the system may be delivered in three separate boxes or all together in one box. More information is available at the following.

- www.mt.com or call 614-438-4771
- www.Sensormatic.com or call 561-912-6544

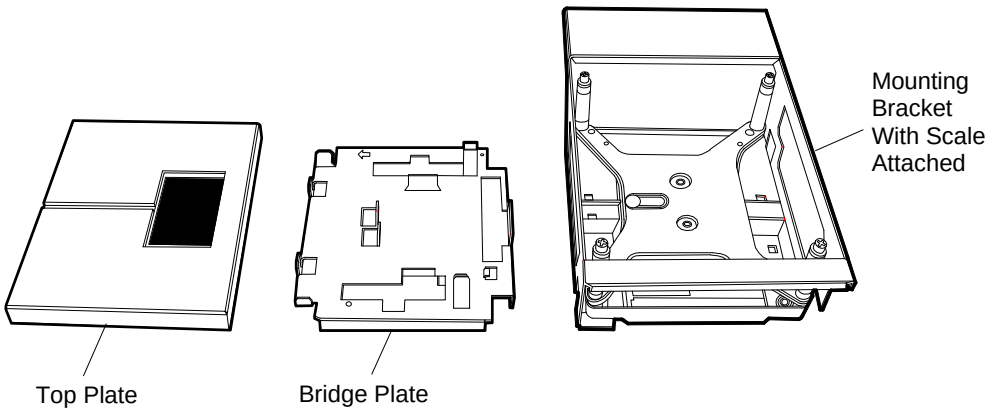
NCR Components

Sensormatic cable must be added: 1416-C841-0030. RJ-45 both ends.



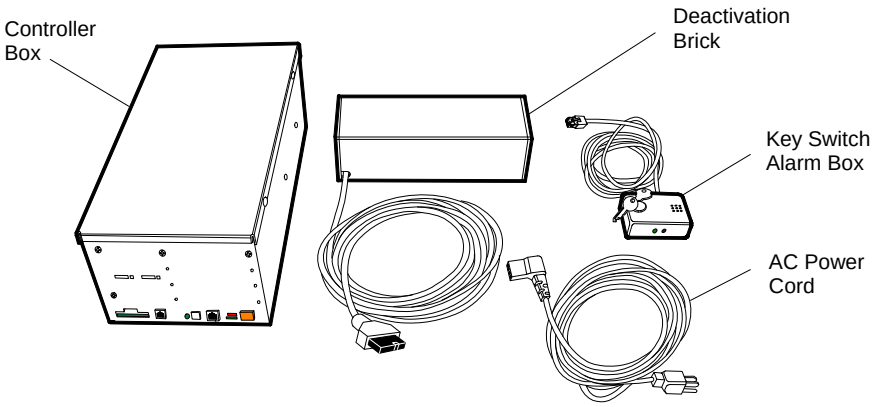
20204

METTLER TOLEDO Components



20206

Sensormatic Components

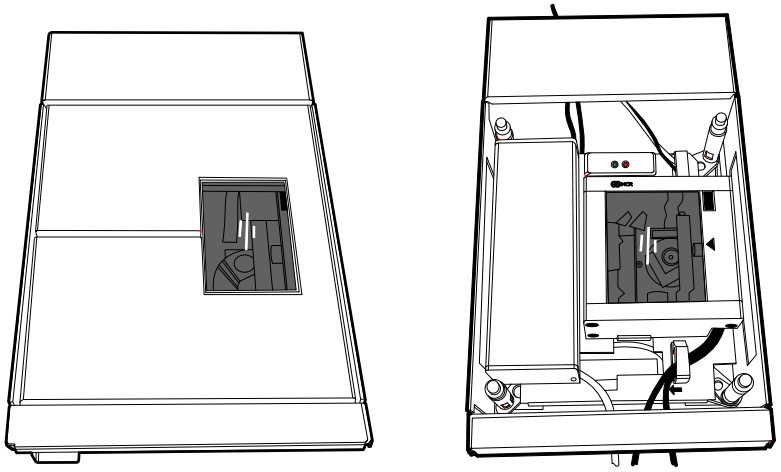


20207

System Construction

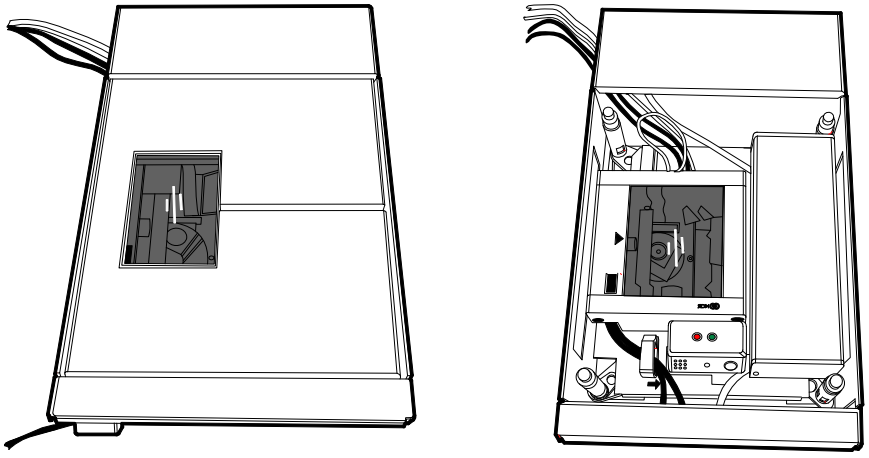
The NCR RealScan 7883, METTLER TOLEDO® Scale, & ScanMax™HS system can be constructed for right-to-left scanning or for left-to-right scanning. This is accomplished through the orientation of the Bridge Plate within the scale unit.

Right-To-Left Scanning



20208

Left-To-Right Scanning

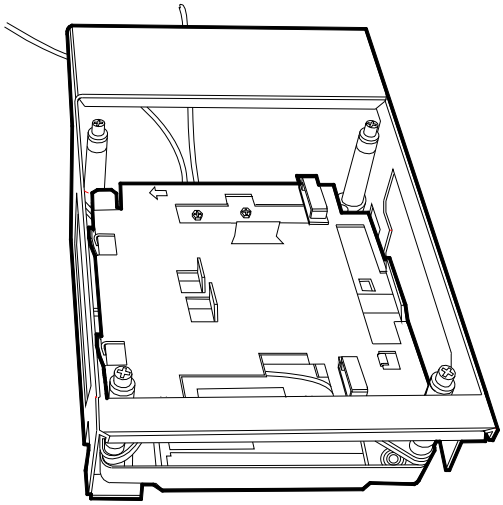


20209

Configuring the Scale

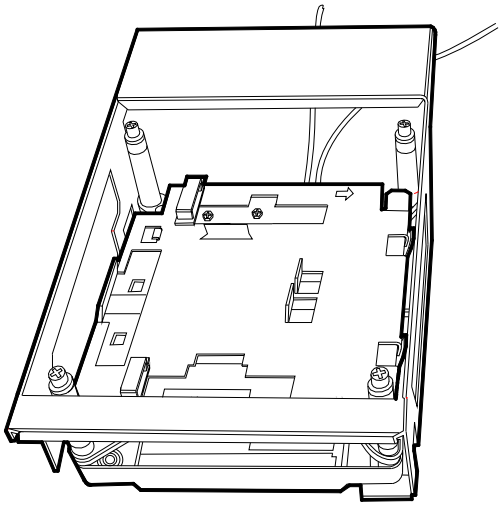
First determine if the system needs to be configured for scanning from right-to-left or from left-to-right. Install the Bridge Plate on the scale unit inside the Mounting Bracket accordingly.

Right-To-Left



20210

Left-To-Right



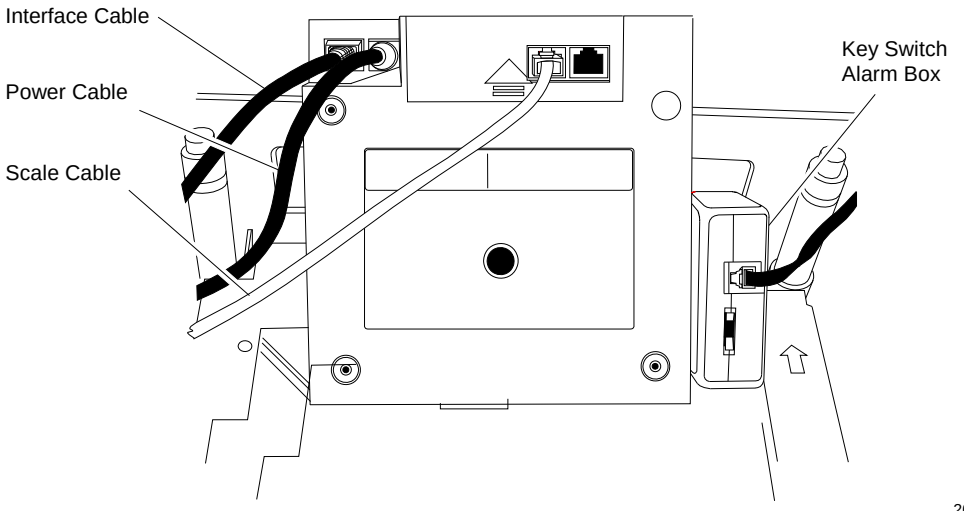
20211

Installing the Scanner

1. Using the Velcro Strips provided by NCR, attach the Key Switch Alarm Box to the RealScan 7883 as shown.

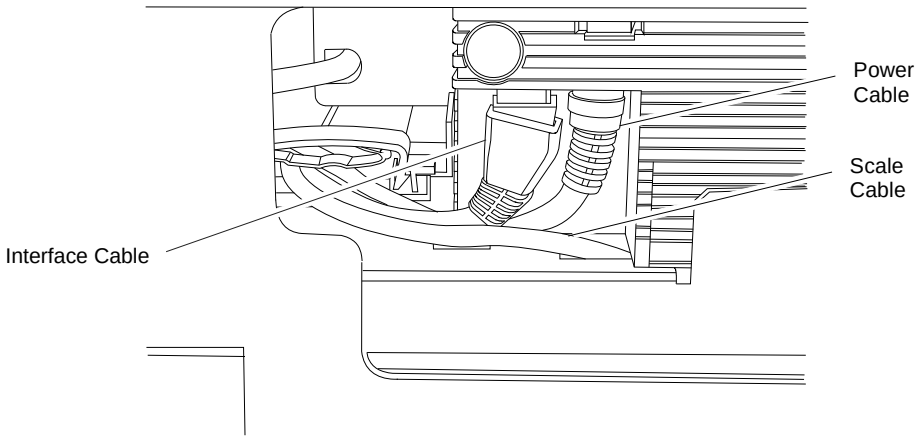
   Note: The top of the Key Switch Alarm Box must be below the top of the RealScan 7883. Refer to the illustrations under *Configuring the Scale*.

2. Connect the Power Cable, Interface Cable, and the Scale Cable to the RealScan 7883.



20212

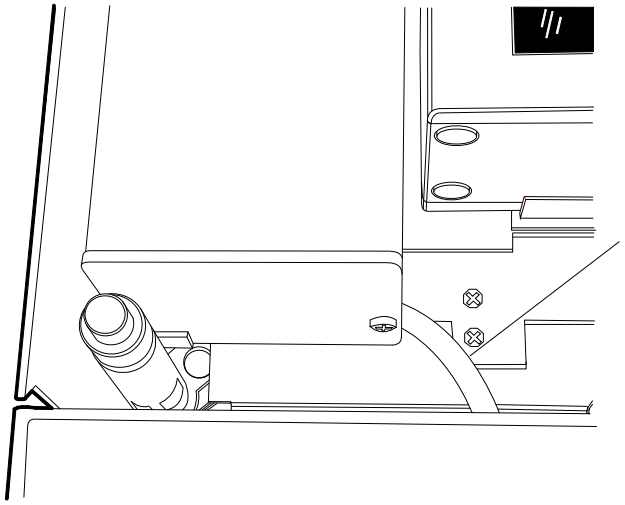
3. Position the RealScan 7883 on top of the Bridge Plate as shown under *Configuring the Scale*. The Scale Cable runs through a slot in the Bridge Plate.



20213

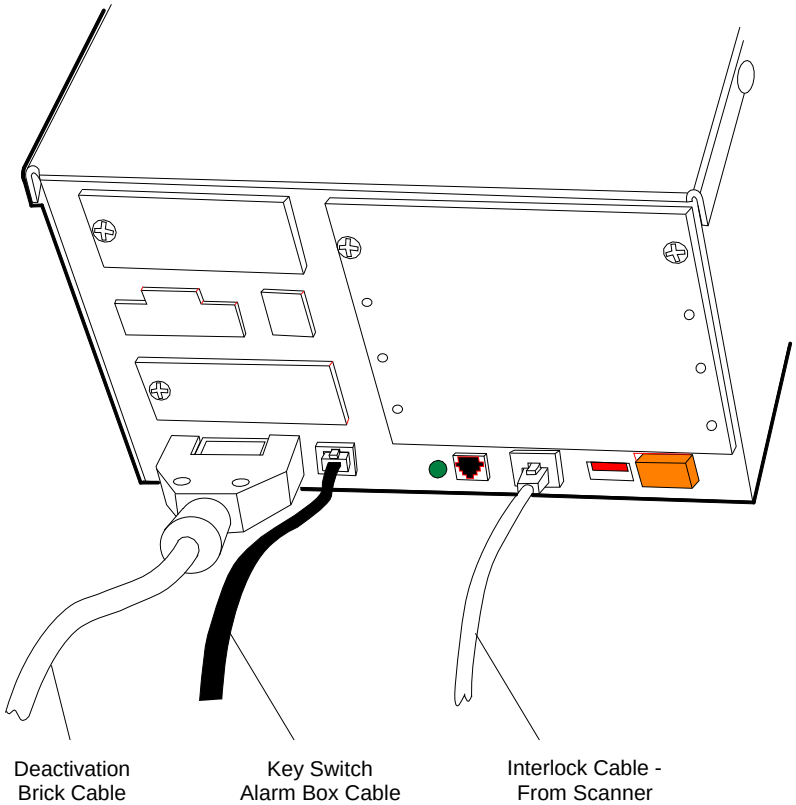
Connecting Sensormatic Components

1. Position the Deactivation Brick on top of the Bridge Plate as shown under *Configuring the Scale*. The cable from the Deactivation Brick must be routed from the bottom of the brick toward the center of the Bridge Plate.



20214

2. Connect the cables to the Controller Box. (New cable to Sensormatic and new Sensormatic Box See Don or Dan)



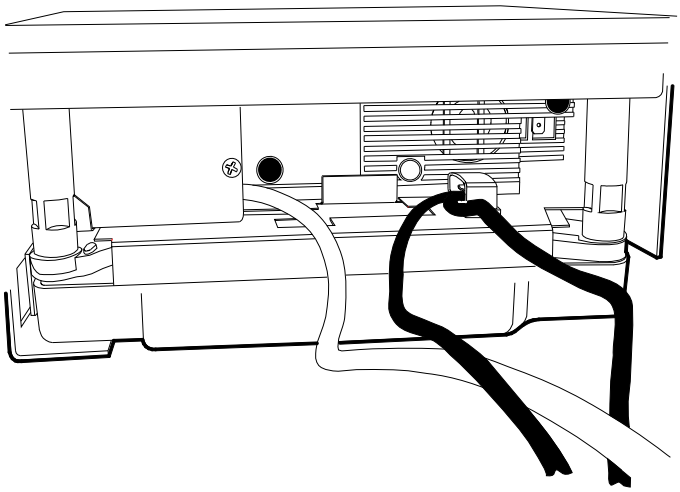
20215

Routing the Cables

How the cables are routed depends on the configuration, right-to-left or left-to-right scanning. In either case the cables are held in place with a cable clamp attached to the Bridge Plate.

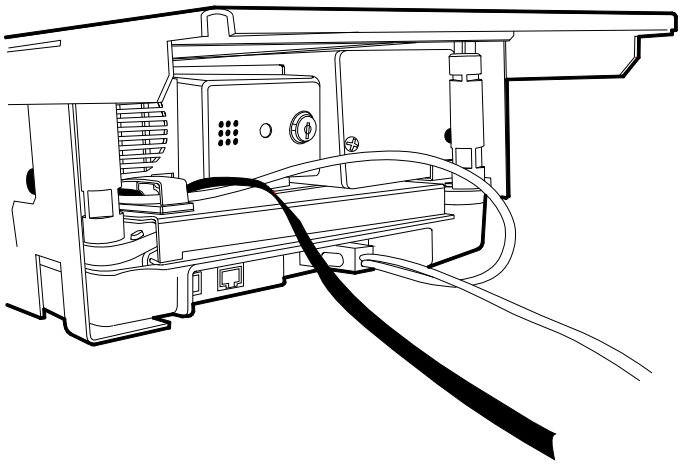
Right-To-Left Scanning

Customer End



20216

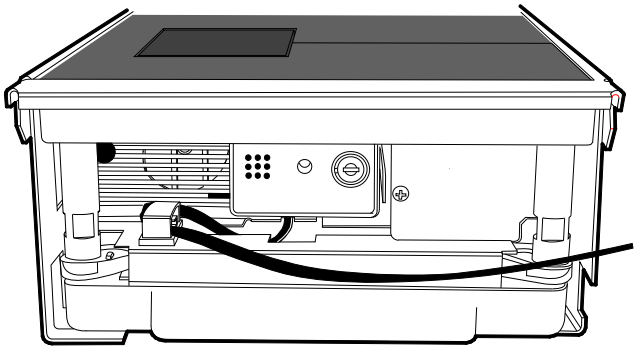
Checkout System End



20217

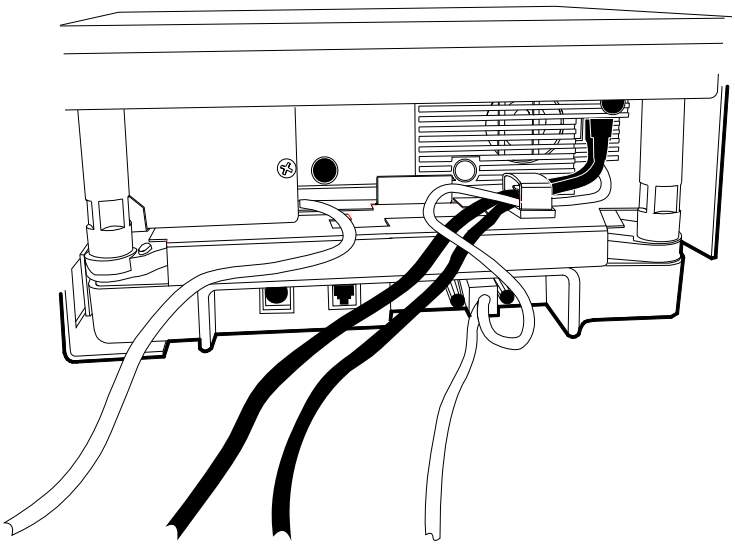
Left-To-Right Scanning

Customer End



20218

Checkout System End



20219

Completing the Installation

Position the unit inside the cutout in the self-checkout terminal. Then install the Top Plate. The Top Plate must positioned correctly for the type of scanning. Refer to *Configuring the Scale*.

Calibrating the METTLER TOLEDO® Scale

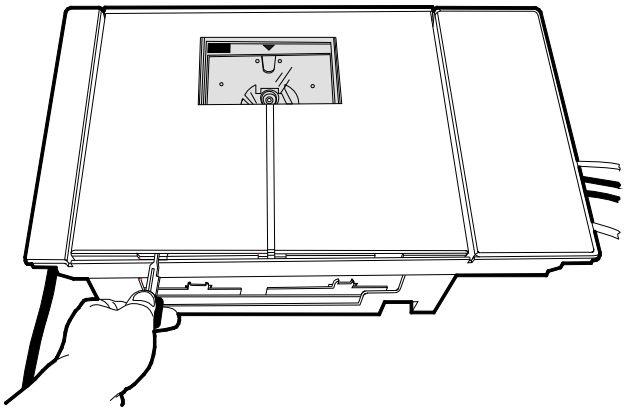
Before proceeding make sure the scanner is configured for a scale. The programming tag sequence is below. The sequence to disable the scale is located in the Programming Worksheets section, on page 59. If speech is enabled, the 7883-1200 or 1694/5 will speak that the Scale Failed if the scale is not connected or not calibrated and the scanner is configured for a scale. The scanner may also have to be set for the proper weight. Data sent by the 7883 will contain 4 digits for weight in pounds and 5 digits for weight in kilograms; these sequences are also provided below.

Programming Mode, **Hex 3**, **Hex 0**, **Hex 3**, **Save and Reset**.

Programming Mode, Hex 3, Hex 0, Hex 1, Save and Reset. (kilograms)

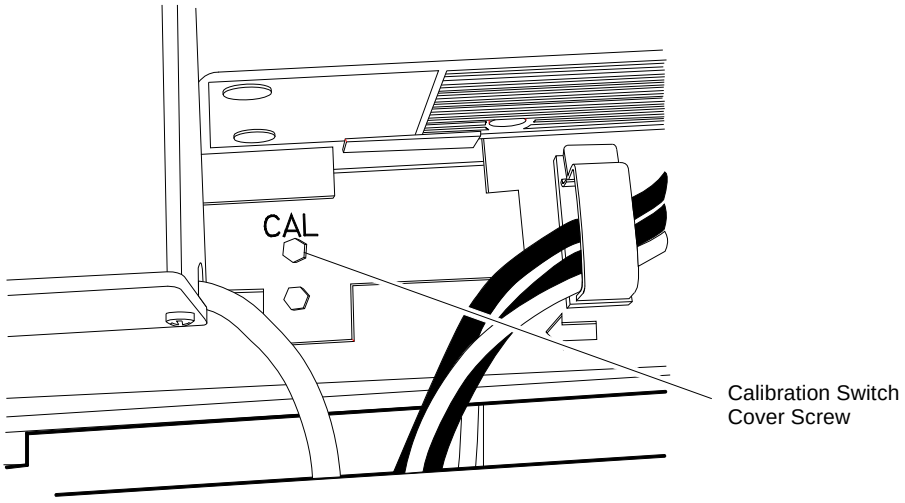
Programming Mode, Hex 3, Hex 0, Hex 2, Save and Reset. (pounds)

1. Use a screw driver or car key to pry up the Top Plate until you can get hold of it, then lift if off the unit.



20220

2. Remove the Calibration Switch cover screw.



20221

3. Press the Calibration Button. One short beep per second starts to sound.
4. Place the Top Plate on the scale. Do not put anything on the Top Plate. It is highly recommended to use the scale display as it has a scale zero switch and prompts for

proper weight.

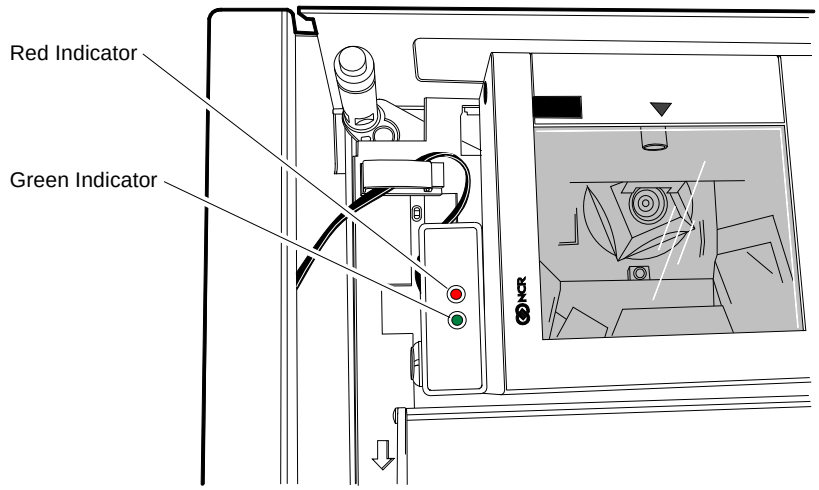
5. Depress the Zero Scale button or scan the Reset Scale tag. Two short beeps per second start to sound.
6. Place 20 pounds (or 10kg) on the Top Plate.
7. Depress the Zero Scale button or scan the Reset Scale tag. One long beep per second starts to sound.
8. Remove the 20 pounds (or 10 kg) from the Top Plate.
9. Depress the Zero Scale button or scan the Reset Scale tag. All beeps stop.
10. Replace the Calibration Switch Cover Screw.
11. Scan the Reset Scale tag.

Note: If using the Reset tag, the scanner speaks (assuming speech is enabled) after completing reset. You must have Firmware above 497-0434118 to use Scale Reset tag for calibrating the scale; as noted above, it is recommended the scale display be used.

Sensormatic Deactivation Indicators

The Key Switch Alarm Box that is fastened to the RealScan 7883 with Velcro strips, contains two indicators to indicate the status of the unit.

- Solid Green – Unit has received an interlock signal.
- Flashing Green – Unit has power.
- Flashing Red – Unit is deactivating a tag.



20222

Sensormatic Programmable Functions

You can program the RealScan7883 to enable or disable the Sensormatic interlock. The interlock must be enabled for the Sensormatic deactivation function to work. You can also program the RealScan7883 to sound a series of beeps when deactivation occurs. This programming is accomplished by scanning the proper sequence of programming tags as the first tags scanned after applying power to the scanner.

- Enable Interlock
  Programming Mode, **Hex 4**, **Hex 2**, **Hex B**, **Save and Reset**
- Disable Interlock
  Programming Mode, **Hex 4**, **Hex 2**, **Hex A**, **Save and Reset**
- Enable Deactivation Beeps
  Programming Mode, **Hex 4**, **Hex B**, **Hex B**, **Save and Reset**
- Disable Deactivation Beeps
  Programming Mode, **Hex 4**, **Hex B**, **Hex A**, **Save and Reset**

Troubleshooting

For the most part, the function of each of the three units; scanner, scale, and deactivation unit; work independently from each other. However, there are some interactions. Following are some basic things to check if the system is not working properly. You may need to refer to the manufacturer's documentation for each unit.

Scanner Problems

If the scanner does not operate, check the following.

- Power Cable connections.
- Interface Cable connections.
- Red laser light is being generated.
- Spinner mirrors are rotating.
- Diagnostic failures (see Installation Guide).

Scale Problems

If scale is not weighing items properly, check the following.

- Scanner Power Cable connections.
- Scanner Interface Cable connections.
- Scale Cable connection to the RealScan 7883.
- Program RealScan 7883 to enable scale by scanning the following sequence of tags **Programming Mode**, **Hex 3**, **Hex 0**, **Hex 3**, **Save and Reset**.

If the scale is still not weighing items properly, perform the following.

1. Remove all items from the Top Plate.
2. Scan the Reset Scale tag – Scale should read 0.00.
3. Put some weight on the Top Plate – Scale should read some weight (not 0.00).
4. Remove all items from the Top Plate – Scale should read 0.00.
5. Remove the Top Plate.
6. Remove any debris from the scale mechanism or Top Plate posts.

The 7883-1200 or 1694/5 will speak providing additional information about the condition of the scale. Insure the following: all cables are connected, power is applied only to the scanner as the scanner provides power to the scale, scale reads 0.00 lb or 0.000 kg upon powerup.

If it suspected that the switch settings for the scale are not correct, below are the settings for the Mettler Toledo 8217 Scale when connected to an NCR RealScan 7883.

With RS-232 cover (bottom of unit) removed the switches are exposed. Looking at the switches with the connector to the RS-232 9-pin DIN connector on your right the two banks of switches should be set as follows (Consult Mettler Toledo 8217 Scale Technical Manual and Parts Catalog) :

Switch on left
Positions 1,6,7,8 Down
Positions 2,3,4,5 Up

Switch on right (next to connector)

Position 1 Down
Position 2 – 8 Up for 30.00 lb, Only position 3 Down for 15.000 kg

Sensormatic Deactivation

If the Sensormatic deactivation is not working, check the following.

- Controller Box Power Cable connections.
- Scanner Power Cable connections.
- Deactivation Brick Cable connection.
- Key Switch Alarm Box Cable connections.
- Interlock Cable connection (from RealScan 7883).
- Program scanner to enable interlock by scanning the following sequence of tags **Programming Mode**, **Hex 4**, **Hex 2**, **Hex B**, **Save and Reset**

Programming Worksheets

10 Communications Protocol

Protocol

3	4	5
IBM Slot Scanner	IBM Hand-Held Bar Code Reader	RS-232

B	D	E 0
IBM 1520 Bar Code Reader	IBM USB	NCR (RS-232) USB

20552

7883-1200 or 1694/5 only

11 Good Read Tone

A **Tone On/Off**

0	1
Off	On

B **Tone Frequency (Hertz)**

B — When entering Tone Frequency, the adjustment can be incremented upward by scanning the **Hex B** tag. Each time you scan the **Hex B**, the tone frequency increases one unit. Scan the **End** tag or a valid Hex tag to end this mode.

C **Tone Length (Milliseconds)**

C — When entering Tone Length, the adjustment can be incremented upward by scanning the **Hex C** tag. Each time you scan the **Hex C** tag, the tone length increases one unit. Scan the **End** tag or a valid Hex tag to end this mode.

D **Tone Volume**

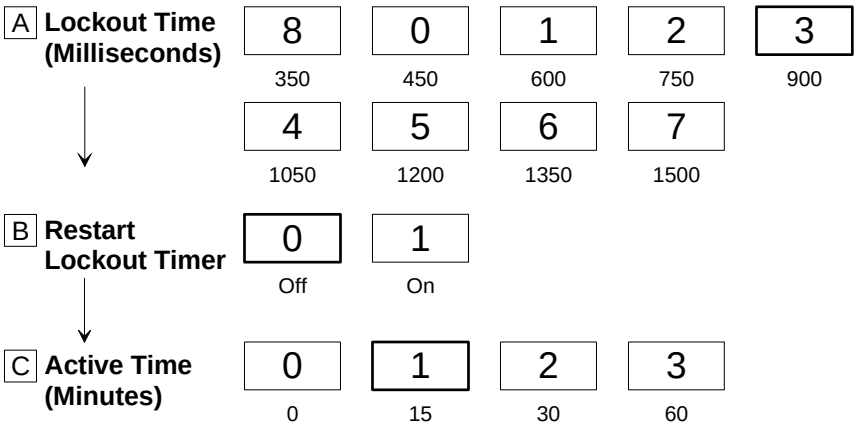
D — When entering Tone Volume, the adjustment can be incremented upward by scanning the **Hex D** tag. Each time you scan the **Hex D** tag, the tone length increases one unit. Scan the **End** tag or a valid Hex tag to end this mode.

E **Not-On-File Tone Volume**

E — When entering Not-On-File Tone Volume, the adjustmentcan be incremented upward by scanning the **Hex E** tag. Each time you scan the **Hex E** tag, the tone length increases one unit. Scan the **End** tag or a valid Hex tag to end this mode.

20238A

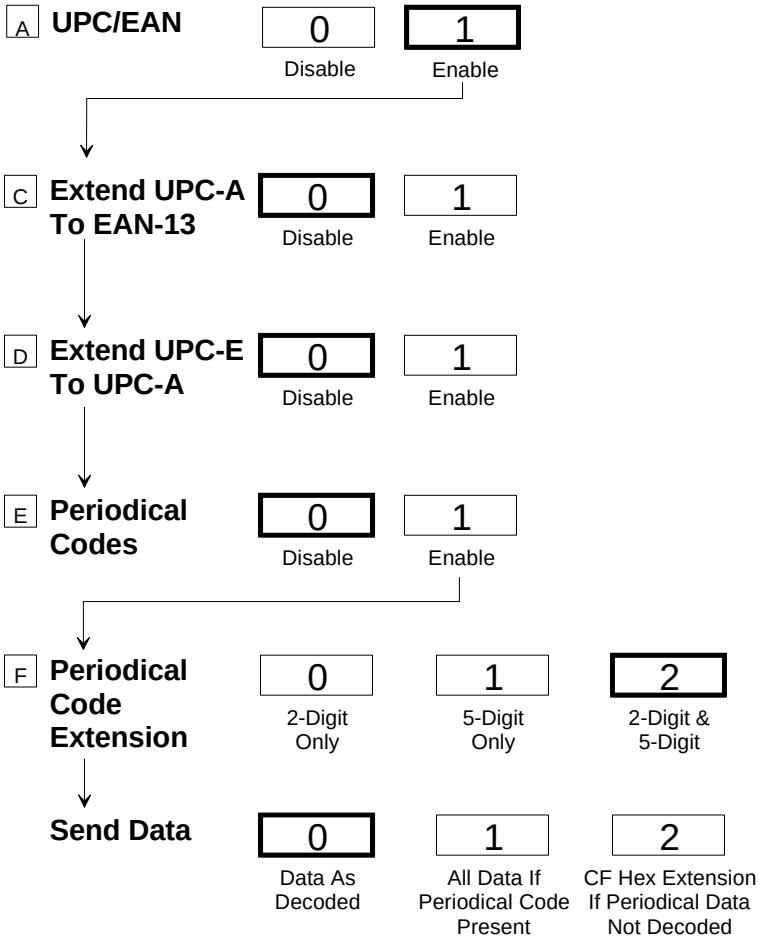
12 Timers



NOTE: NCR suggests that you do not set the Active Time parameter to 0. Leaving the laser light on all the time reduces its life expectancy.

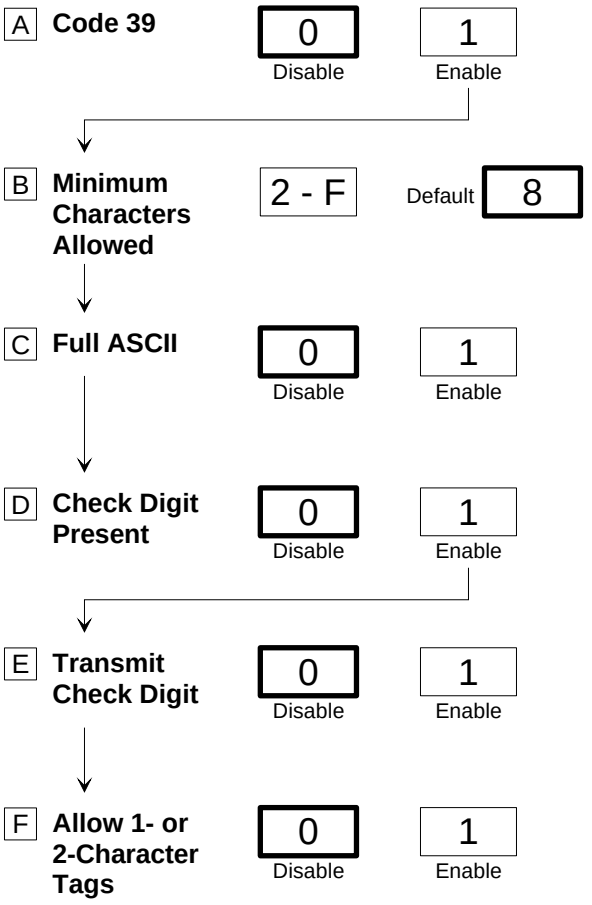
R0136

13 Bar Codes – 1



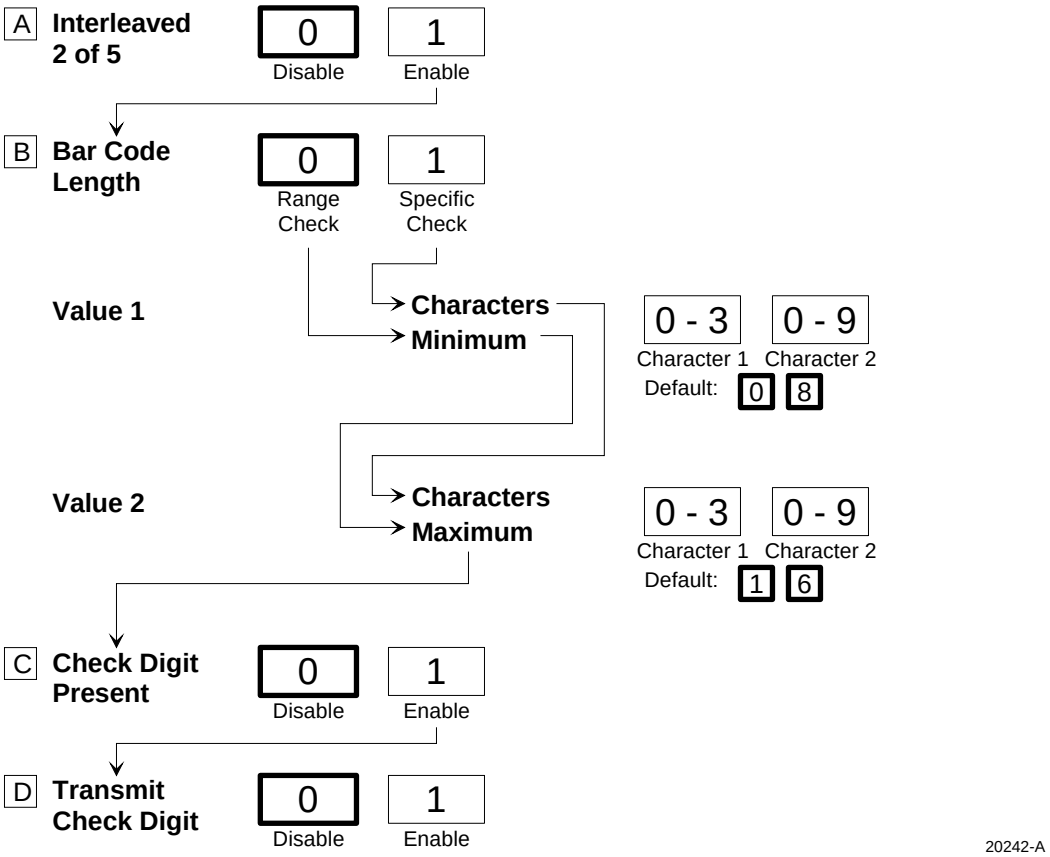
20556

14 Bar Codes - 2



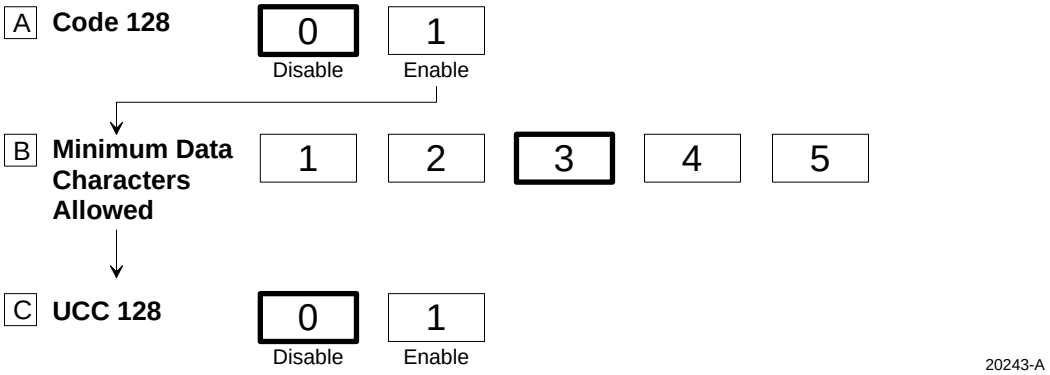
20241-A

15 Bar Codes - 3



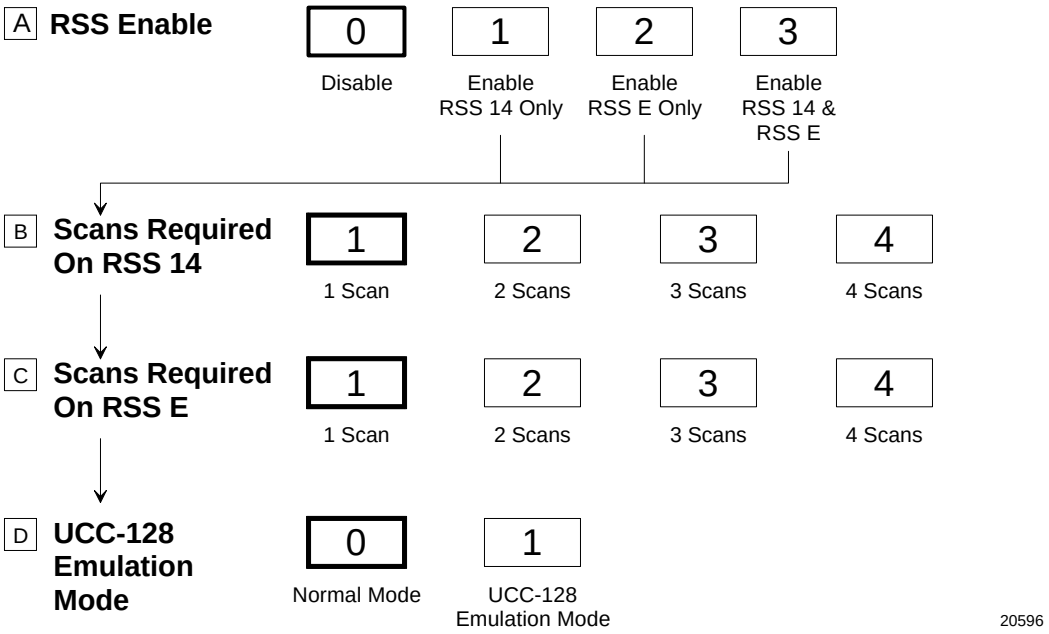
20242-A

17 Bar Codes - 4

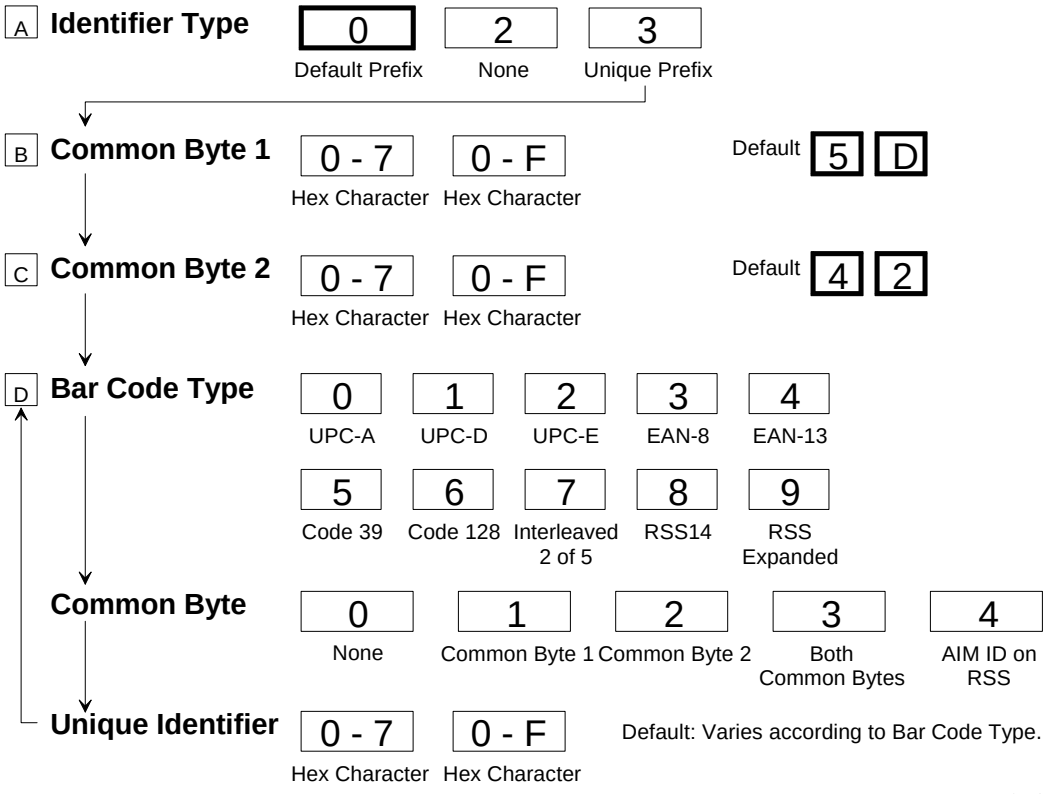


20243-A

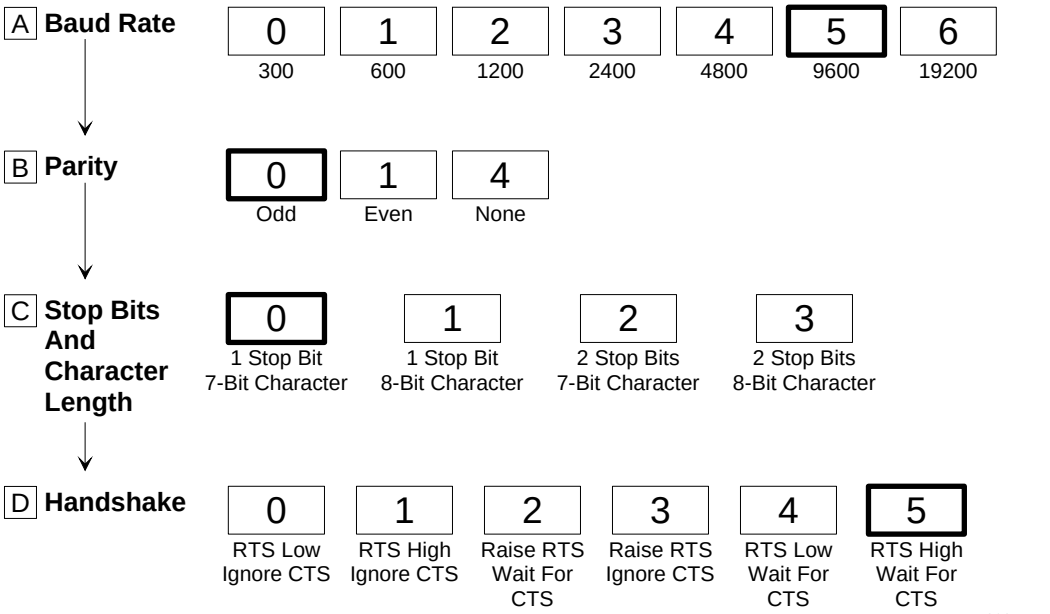
18 Bar Codes – 5



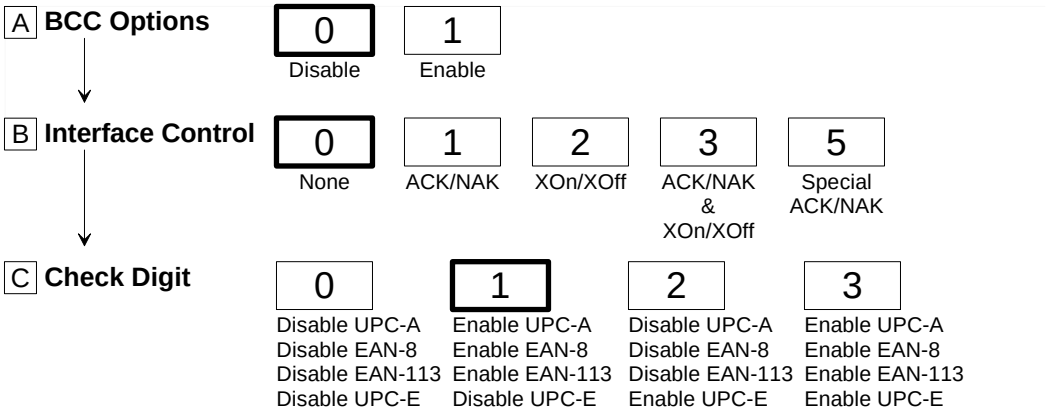
16 Label Identifiers



20 RS-232 Parameters - 1

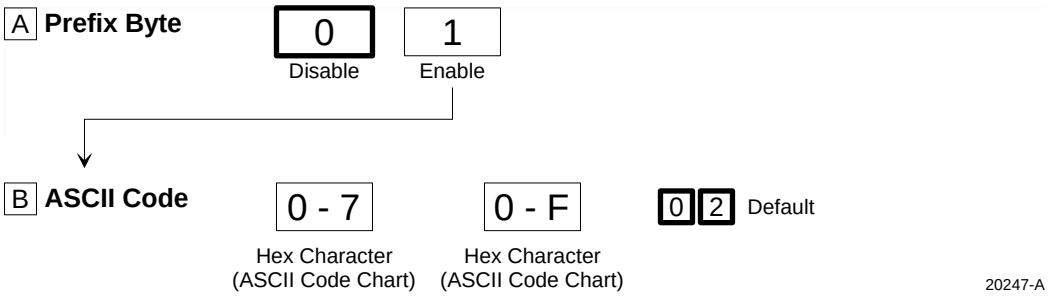


21 RS-232 Parameters - 2

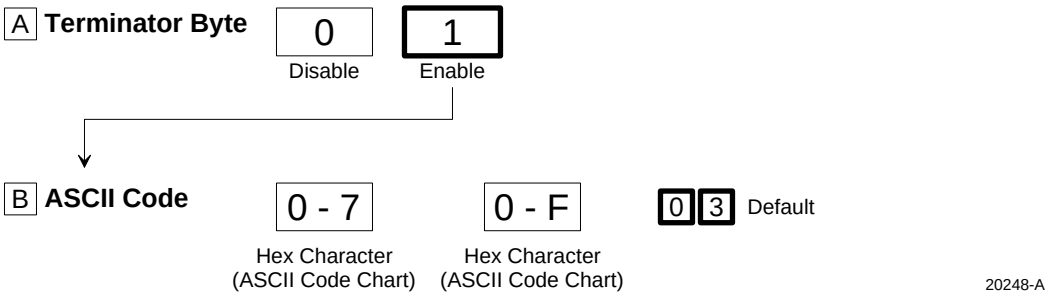

A BCC Options
0 Disable
1 Enable
B Interface Control
0 None
1 ACK/NAK
2 XOn/XOff
3 ACK/NAK & XOn/XOff
5 Special ACK/NAK
C Check Digit
0 Disable UPC-A Disable EAN-8 Disable EAN-113 Disable UPC-E
1 Enable UPC-A Enable EAN-8 Enable EAN-113 Disable UPC-E
2 Disable UPC-A Disable EAN-8 Disable EAN-113 Enable UPC-E
3 Enable UPC-A Enable EAN-8 Enable EAN-113 Enable UPC-E
20246-A

Note: Check Digit parameter also applies to UPC-E when using OCIA communications.

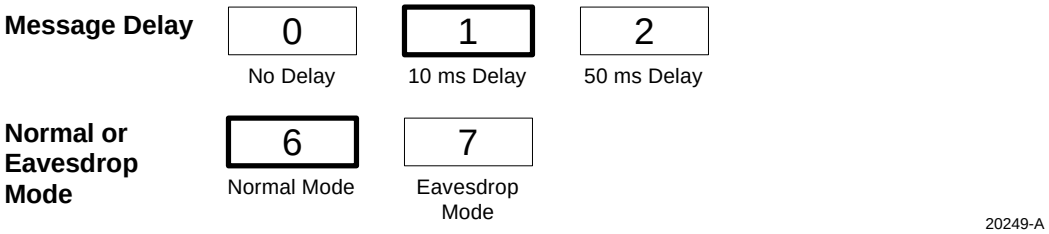
22 RS-232 Prefix Byte



23 RS-232 Terminator Byte



24 RS-232 Communications Options



28 Wedge Options

A	**Country Code Option**	**0** United States	1 International			
B	**Caps Lock Option**	0 Caps Lock OFF	**1** Caps Lock ON			
C	**Number Lock & Keypad Option**	**0** Keypad not Used	2 Keypad Used Num Lock ON			
D	**Inter Character Delay (time approx.)**	**0** Every 4ms	1 Every 12ms	2 Every 24ms	3 Every 48ms	4 Every 96ms

24854

Note: To use the 28 Wedge Options worksheet, firmware 497-0438809 (438810 for fls file) and higher is required.

30 Scale Parameters

Model	1 5 digits (Kilograms)	2 4 digits (Pounds)	
	3 Scanner/Scale	4 Scanner Only	
IBM Address	5 Address 6A	6 Address 6B	**7** Address 6E

11812

32 Miscellaneous Parameters – RealScan 7883-1000

IBM Tone Control (Good Read Tone Control)	3 Disable	**4** Enable
IBM Rexmit Control	**7** 3 Times	8 Forever
IBM Tag Data Format	**E** Hex	F ASCII

20250A

32 Miscellaneous Parameters – RealScan 7883-1200 or 1694/5

IBM Tone Control (Good Read Tone Control)

3	4
Disable	Enable

IBM Rexmit Control

7	8
3 Times	Forever

Enable/Disable Voice Messages

D
Toggle

IBM Tag Data Format

E	F
Hex	ASCII

20557

ASCII Code Chart

ASCII Code Chart															
00	NULL	**10**	DLE	**20**	SP	**30**	0	**40**	@	**50**	P	**60**		**70**	p
01	SOH	**11**	DC1	**21**	!	**31**	1	**41**	A	**51**	Q	**61**	a	**71**	q
02	STX	**12**	DC2	**22**	"	**32**	2	**42**	B	**52**	R	**62**	b	**72**	r
03	ETX	**13**	DC3	**23**	#	**33**	3	**43**	C	**53**	S	**63**	c	**73**	s
04	EOT	**14**	DC4	**24**	$	**34**	4	**44**	D	**54**	T	**64**	d	**74**	t
05	ENQ	**15**	NAK	**25**	%	**35**	5	**45**	E	**55**	U	**65**	e	**75**	u
06	ACK	**16**	SYN	**26**	&	**36**	6	**46**	F	**56**	V	**66**	f	**76**	v
07	BEL	**17**	ETB	**27**	'	**37**	7	**47**	G	**57**	W	**67**	g	**77**	w
08	BS	**18**	CAN	**28**	(	**38**	8	**48**	H	**58**	X	**68**	h	**78**	x
09	HT	**19**	EM	**29**	)	**39**	9	**49**	I	**59**	Y	**69**	i	**79**	y
0A	LF	**1A**	SUB	**2A**	*	**3A**	:	**4A**	J	**5A**	Z	**6A**	j	**7A**	z
0B	VT	**1B**	ESC	**2B**	+	**3B**	;	**4B**	K	**5B**	[	**6B**	k	**7B**	{
0C	FF	**1C**	FS	**2C**	,	**3C**	<	**4C**	L	**5C**	\	**6C**	l	**7C**	|
0D	CR	**1D**	GS	**2D**	-	**3D**	=	**4D**	M	**5D**	]	**6D**	m	**7D**	}
0E	S0	**1E**	RS	**2E**	.	**3E**	>	**4E**	N	**5E**	^	**6E**	n	**7E**	~
0F	S1	**1F**	US	**2F**	/	**3F**	?	**4F**	O	**5F**	_	**6F**	o	**7F**	DEL

R0040

Regulatory Information

Federal Communications Commission (FCC) Radio Frequency Interference Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user is required to correct the interference at his own expense.

Information to User: This equipment must be installed and used in strict accordance with the manufacturer's instructions. However, there is no guarantee that interference to radio communications will not occur in a particular commercial installation. If this equipment does cause interference, which can be determined by turning the equipment off and on, the user is encouraged to consult an NCR service representative immediately.

Caution: NCR is not responsible for any radio or television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connecting cables and equipment other than those specified by NCR. Such unauthorized modifications, substitutions, or attachments may void the user's authority to operate the equipment. The correction of interference caused by such unauthorized modifications, substitutions, or attachments is the responsibility of the user.

Voluntary Control Council for Interference (VCCI) Radio Frequency Interference Statement

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

16105

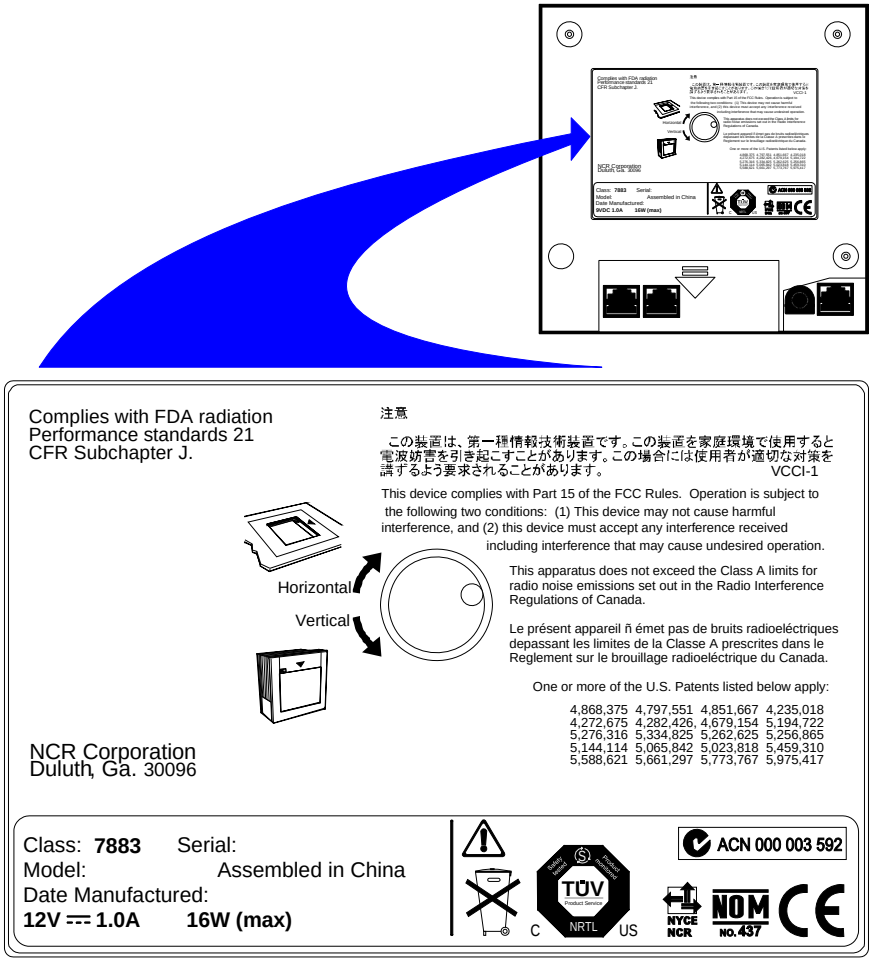
Canadian Department of Communications Radio Frequency Interference Statement

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communication.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescrites dans le Règlement sur le brouillage radioélectriques édicté par Ministère des Communications du Canada.

Identification Labels

The Identification Labels are molded into the bottom of the cabinet. They provide necessary information about the unit: power requirements, radio interference information, and applicable NCR patents.


Complies with FDA radiation Performance standards 21 CFR Subchapter J.
注意
この装置は、第一種情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。
VCCI-1
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.
Horizontal
Vertical
This apparatus does not exceed the Class A limits for radio noise emissions set out in the Radio Interference Regulations of Canada.
Le présent appareil ñ émet pas de bruits radioeléctriques depassant les limites de la Classe A prescrites dans le Reglement sur le brouillage radioeléctrique du Canada.
One or more of the U.S. Patents listed below apply:
4,868,375 4,797,551 4,851,667 4,235,018
4,272,675 4,282,426, 4,679,154 5,194,722
5,276,316 5,334,825 5,262,625 5,256,865
5,144,114 5,065,842 5,023,818 5,459,310
5,588,621 5,661,297 5,773,767 5,975,417
NCR Corporation
Duluth, Ga. 30096
Class: 7883 Serial:
Model: Assembled in China
Date Manufactured:
12V ⎓ 1.0A 16W (max)
ACN 000 003 592
TÜV
NRTL
C
US
NYCE
NCR
NOM
NO. 437
CE

19763

CE Mark Applicability

This product conforms to the requirements of the following European Union (EU) New Approach Directives.

- 89/336/EEC EMC
- 73/23/EEC Low Voltage

Declaration of Conformity

We, **NCR Corporation**, Retail Solutions Division Atlanta, 2651 Satellite Boulevard, Duluth, Georgia, 30096-5810, U.S.A., declare under our sole responsibility that the product **NCR RealScan 7883 Bar Code Scanner** to which this declaration relates is in conformity with the following standard or other normative document following the provisions of the noted Directives.

EU Directive	Harmonized Standard(s)
89/336/EEC (EMC)	EN 55022: 1994 + A1 (1995) + A2 (1997) EN 50082-1, Part 1 (1992) IEC 801-2: 1984, Severity Level 3 IEC 801-3: 1984, Severity Level 2 IEC 801-4: 1988, Severity Level 2
72/23/EEC (Low Voltage)	EN 60950: 1992 A1, A2, A3, A4, and A11 EN 60825-1: 1993+A1+A2

Director of Quality Assurance
NCR Corporation
RSD-Atlanta
2651 Satellite Boulevard
Duluth, GA 30096-5810
U.S.A.

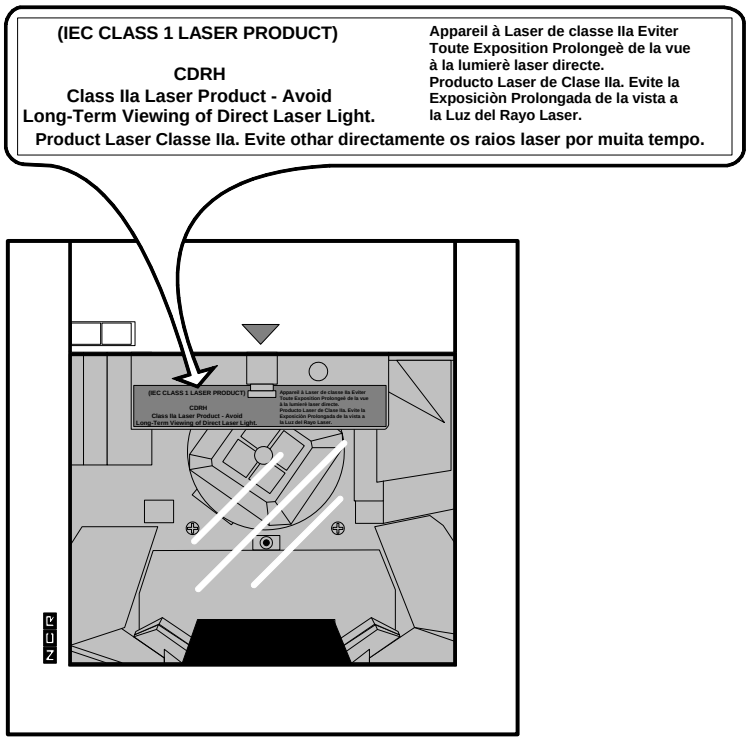
European Contact
EU Patent Attorney
NCR Limited
206 Marylebone Road
London NW1 6LY
England

Laser Safety

The NCR RealScan 7883 is not intended for long-term viewing of the direct laser light. However, the unit is safe if used as it was intended.

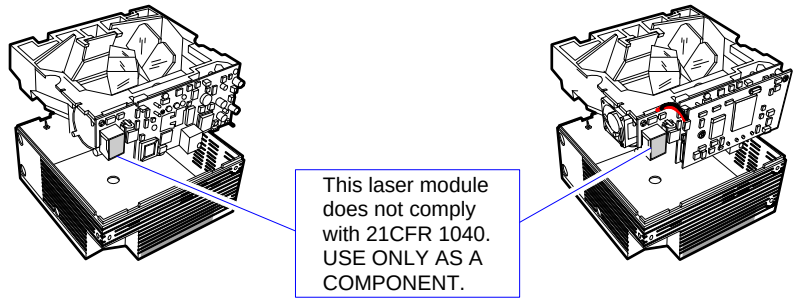
Note: The NCR RealScan 7883 is a **CDRH Class IIa** and **IEC Class 1 Laser Product**

Laser Safety Label


(IEC CLASS 1 LASER PRODUCT)
CDRH
Class IIa Laser Product - Avoid
Long-Term Viewing of Direct Laser Light.
Appareil à Laser de classe IIa Eviter
Toute Exposition Prolongeè de la vue
à la lumierè laser directe.
Producto Laser de Clase IIa. Evite la
Exposiciòn Prolongada de la vista a
la Luz del Rayo Laser.
Product Laser Classe IIa. Evite othar directamente os raios laser por muita tempo.

18546

Laser Module Label



RealScan 7883-1000 RealScan 7883-1200, -1694, -1695

24868

Laser Power

The NCR RealScan 7883 meets the following laser power requirements.

- Class 1 EN 60825-1: 1994 (Europäische Norm)
- Class 1 IEC 825-1: 1993 (International Electrotechnical Commission)
- Class IIA CDRH (Center for Devices and Radiological Health) FDA, U.S.A.

Following is the radiant energy of the laser light as applied to each of the specified requirements.

Maximum Radiant Power (CDRH Calculation)	2.7 Microwatts
Maximum Radiant Power (EN 60825-1 / IEC Calculation)	0.82 Milliwatts
Accessible Emission Limit (CDRH Calculation)	3.9 Microwatts
Accessible Emission Limit (EN 60825-1 / IEC 825-1 Calculation)	0.80 Milliwatts

Warning – Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous radiation exposure.

Programming Tags

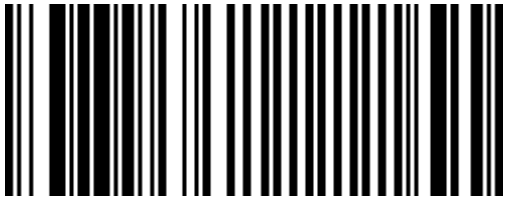
Volume Adjustment

11817

Reset

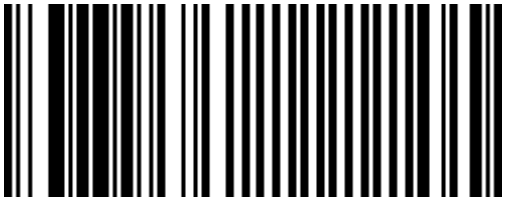
11818

Default



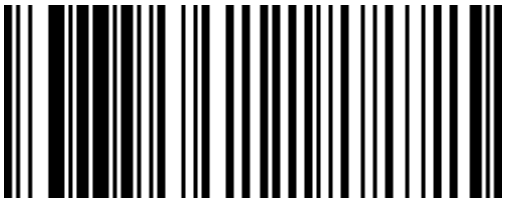
R0046

Programming Mode



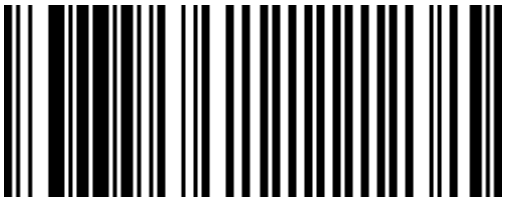
R0042

End



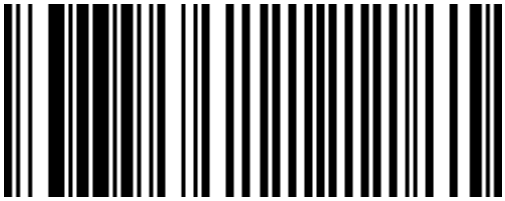
R0043

Save and Reset



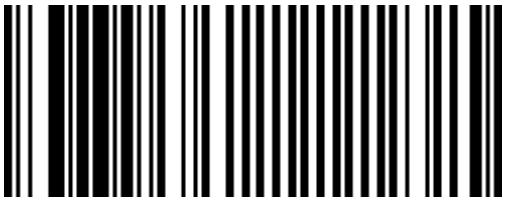
R0044

Abort



R0045

Diagnostic Mode



R0041

RS-232 Temporary Service Mode

16576

Mode 1

11500

Mode 2

11501

Reset Tallies

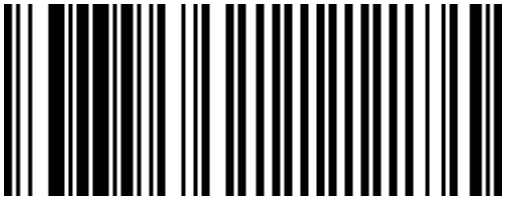
11502

Firmware Flashing

Super ASIC Models

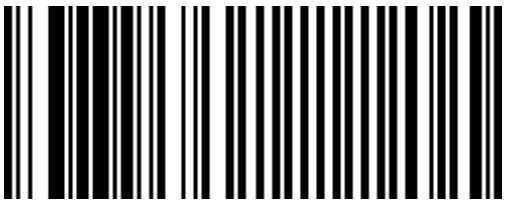
20600

Hex 0



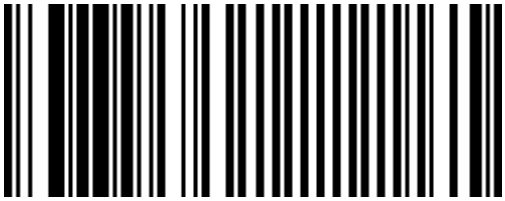
R0048

Hex 1



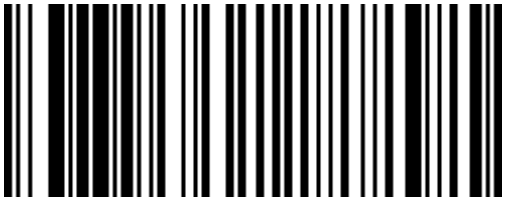
R0049

Hex 2



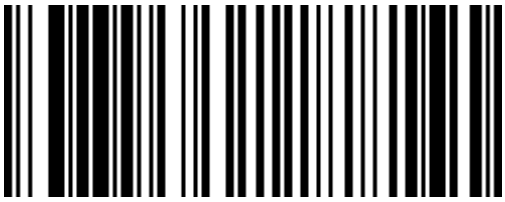
R0050

Hex 3



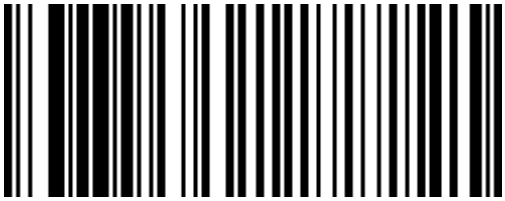
R0051

Hex 4



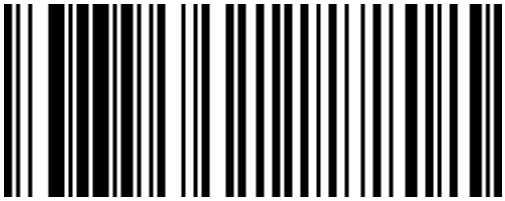
R0052

Hex 5



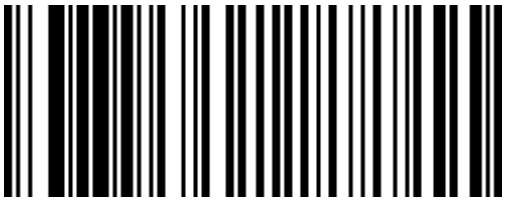
R0053

Hex 6



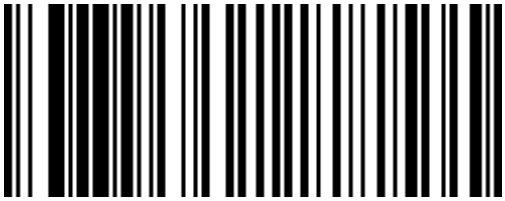
R0054

Hex 7



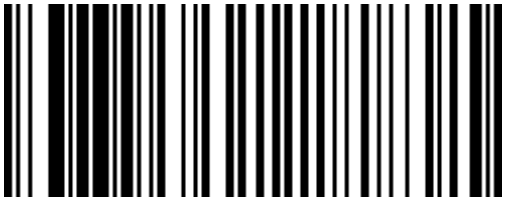
R0055

Hex 8



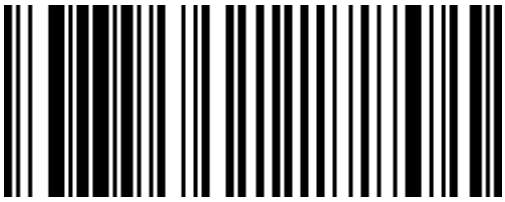
R0056

Hex 9



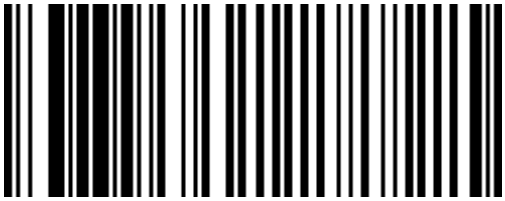
R0057

Hex A



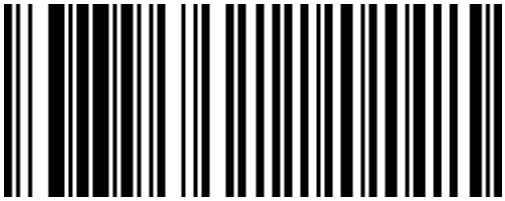
R0058

Hex B



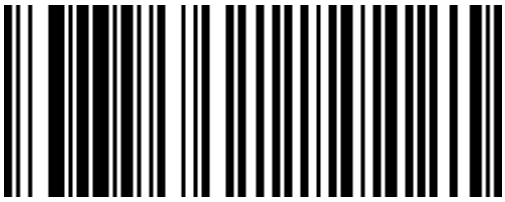
R0059

Hex C



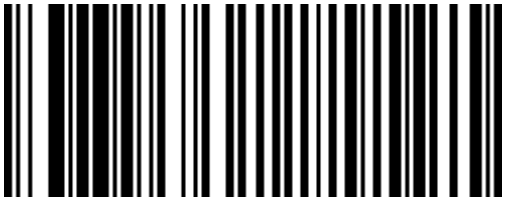
R0060

Hex D



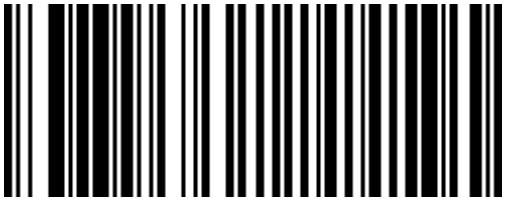
R0061

Hex E



R0062

Hex F



R0063

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